

**THE RELATIONSHIP BETWEEN NEEDS OF MOTHERS' OF PHYSICALLY
AND INTELLECTUALLY IMPAIRED CHILDREN AND CURRENT
EARLY INTERVENTION SERVICES IN THE
KINGDOM OF SAUDI ARABIA**

by

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JUNE 2000

I declare that the Relationship Between Needs of Mothers' of Physically and Intellectually Impaired Children and Current Early Intervention Services in the Kingdom of Saudi Arabia is my own work. Also that all the sources I have used or quoted from have been indicated and acknowledged by means of complete references.



M. A. TASHKANDI

June 2000

This study is dedicated to my husband Soud Zedan, my children Haya, Hani, Dena, Zain, and Rana, to my parents, and my brothers for all their support and faith in me.

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ABSTRACT

Review of the literature on the currently available services for special needs children and early intervention programs in the Kingdom of Saudi Arabia, supports the fact that early intervention services for young special needs children and their families are very limited. The present study aims at determining the importance of early intervention services for children with special needs and their families. The study also aims to firstly identify the need for establishing more early intervention programs across the country as well as to give suggestions for effective utilization of the presently available services. Secondly, the study focuses on determining the needs of mothers of children with intellectual and physical impairments. Thirdly, the study aims to assess the extent to which the available services are benefiting the special needs children and their families.

A descriptive research study was conducted on a sample of 27 mothers of young children with intellectual and physical impairments. Three questionnaires were designed and distributed to obtain information about the following issues: 1) the current early intervention services available for young

special needs children in the Kingdom of Saudi Arabia and the Gulf countries. 2) the background information of the families of the sample. 3) the needs of the mothers in the sample. The data was qualitatively analyzed and interpreted by comparing frequencies and their corresponding percentage values.

Results of this study indicated that the majority of the mothers expressed severe and moderate need for more information about their child's impairment; and needed more services and intervention programs for their child. Results from the study also established a relationship between some of the socio-economic background variables and the different categories of needs. Finally, some of the needs of the mothers were met with the early intervention services provided by the centre where the study was conducted.

10 Key Terms describing the dissertation:

Early intervention, mother's needs, socio-economic variables, exceptional children, special needs children, special learners, disabilities, intellectual and physical impairments, the Kingdom of Saudi Arabia.

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CHAPTER 1

Introduction, Statement of the Problem, and Aim of the Study

1.1 Introduction

All children exhibit differences in performance and attitude from one another. Often these differences are quite apparent, but in some instances the differences may be subtler. In addition, all children present different skill levels in their performance and interest in the learning environment. It is the degree of these differences that determines whether a child is different or "exceptional" and therefore eligible for any special educational services.

Children display a wide variety of emotional, physical, and learning differences. When a child differs from what is considered normal to such an extent that specialized and individualized educational programming is required to meet that child's unique needs, he or she is then considered an "exceptional" child. Accordingly, this child is expected to require specialized services to help him/her in acquiring new skills and to learn from the immediate environment

1.1.1 Differences and Similarities in children

Special needs children include children who are below average intellectually, display learning and/or behavioral problems, or may have physical or sensory impairments, and who may be gifted or with special talents. The study of special needs children is sometimes seen as the study of *differences*. The special needs child is different in some way from the "average" child. Such a child may have problems or special talents in thinking, or hearing, or seeing, or moving, or speaking, or socializing. Sometimes such a child may have a combination of special abilities or impairments.

The study of special needs children may also be seen as the study of *similarities*. Special needs children are not different from the “average” in every way. When comparing between exceptional and non-exceptional children, attention is more on what these children have in common and the similarities in their characteristics, needs, and ways of learning (Hallahan & Kauffman, 1997:4).

1.1.2 Children who are At-risk

In addition to those children who are identified as being exceptional, there are children who are referred to as '*children at-risk*'. Most children, upon conception and then birth, become subject to the hazards of human existence and of the environment in which they live. Some infants and/or children face greater risks than others do which may alter their physical, mental, or developmental futures. In general, children are considered at-risk *when they have been subjected to certain adverse genetic, prenatal, perinatal, postnatal, or environmental conditions that are known to cause defects or are highly correlated with the appearance of later abnormalities* (Peterson, 1988:138).

The presence of such factors is not necessarily an indication of an impending problem or impairment. But the probabilities are simply increased because these factors are precursory to other difficulties. Usually these children are not yet identified as having an impairment, but they are considered to have a high probability of developing an impairment if professional intervention is not offered. Given these heightened probabilities, early intervention and prevention become of major importance.

The term *at-risk* is often used with the very young child who, because of negative conditions surrounding their birth, nurturing, or immediate environment, may experience some developmental problems. At-risk children are more in need of early intervention services because of the many different negative conditions that surround them. The families of these children need such early intervention services in order to provide them with the support and

help they may need to better understand the problems that their child may be facing (Heward,1996:24-26).

1.1.3 Importance of early learning

Exceptionalities may vary greatly in cause, degree, and its effect on the child's educational progress. These effects may also vary depending on the child's age, the immediate living environment, and the on-set of educational services. This is why focus has shifted in the last decade to emphasize the need for early childhood services and early intervention programs. All children need some form of teaching to enhance their learning from their immediate environment as they grow. Nature and nurture together will determine the outcomes of the child's future life.

A child's early experiences through an enriched home and school environment has a large impact on his/her mental capacities. When a parent interacts with their child with an understanding of his/her development, the child's developmental needs are immediately challenged. Therefore, early learning must take place in a meaningful context and in an enriched and appropriate environment (Newberger, 1997:4). Research on child development shows that during the first three years of a child's life, the immediate environment has enormous impact on how the circuits of the brain will function in later years. Brain connections develop quickly in response to the outside stimulation, so that a child's experiences whether good or bad influence the sensations transmitted to the brain and therefore affect any future stimulation (Newberger, 1997:5). That is way the first three to six years of a child's life are crucial to his learning and establishment of his/her character and personality.

1.1.4 The effects of a special needs child on its family

The birth of a child can have a significant effect on the dynamics of the family. Parents and the other children in the family must undergo a variety of changes to adapt to the presence of a new member. The birth of a child with

an impairment can have an even more profound effect on the family. Most infants with impairments are frequently characterized by extremes of behavior, which influences the interactions they have with their parents and siblings. The extra care and special accommodations that are required by some children who are impaired often alter how parents and siblings interact with the child and influences their attitudes and behaviors.

Usually families of non-exceptional or regular children spend a lot of time and effort in raising their children to ensure their adequate development within the norm. Moreover, families of special needs children may feel even more obligated to spend more time with their exceptional child for various reasons. Some of these reasons may be due to feelings of guilt, over-protection, or lack of knowledge about their child's disability. Therefore demands for more intense parental and professional involvement may be even higher (Hallahan & Kauffman, 1994: 495-501)

When a child is diagnosed with special needs, a series of changes can occur and effect the family. The parents are required to focus extra energy on the exceptional child to ensure getting help and support. Other children in the family must make allowances for the child with special needs. Professionals feel obligated to offer help and support, which some families may at first feel, is an invasion of their privacy.

These are only some of the negative forces that the family may face at this very initial stage of their dilemma. These forces can lead to a breakdown in the optimal parent-child interaction, of which the special needs child is in desperate need for. Training and help from different professionals such as special educators and social workers can help parents develop ever-increasing skills to improve the quality of their interactions with their child, resolve family problems and issues, and secure any necessary resources and support systems.

Most early intervention programs focus on teaching and directing families of special needs children on how to handle the different exceptionality

conditions. Different support services to match the needs of the families may also be offered. Professionals in these programs aim at teaching these families how to provide enriched home environments, and adequate parental involvement to ensure proper development for the child (Hallahan & Kauffman, 1997:71).

Families of special needs children usually require help and support from professionals on how to better handle their special needs child. They are in need for training of simple techniques to enrich their child's immediate environment. And need teaching on how to stimulate their child's skills according to his/her individual developmental abilities.

1.1.5 Enrichment and early intervention

Enriched home environments can help make the most of children's mental capacities. If the parents in dealing with their special needs child put some understanding of the child's development in their interactions, the child's developmental needs will be met more than just adequately (Newberger, 1997:9). The key to fostering early childhood learning is in understanding that there is a range in the amount of stimulation for each child, and a different range with which children may be comfortable with and can tolerate such stimulation. Also, before children can move on to new skills they must have time to practice and master the skills they have already learned (Newberger, 1997:6).

Effective early childhood instructional practices emphasize child-initiated, child-directed play activities based on the assumption that young children are intrinsically motivated to learn by their desire to understand their environment (Udell, Peters, Templeman, 1998:45). Therefore, with the right enriched environment and proper stimulation, the child should be able to develop new skills adequate with his developmental needs. The effectiveness of an enriched home environment is usually established when the parents of the disabled child have understood their child's abilities, and work on providing

the adequate stimulation and enrichment from the immediate environment to help their child in learning and acquiring new skills.

1.1.6 *The new outlook of early intervention programs*

The effectiveness of early intervention services is about young children, their future, and consequently the future of their communities. Early intervention is dealing with vulnerable children, whose development has been clearly compromised or threatened by biological or environmental circumstances. Since the early 1970's, community based service programs - in the United States - have evolved in order to intervene as early as possible to minimize the impact of prevailing risk factors, to strengthen families, and to establish the foundations for subsequent development.

As a result, in the 1980's highly sophisticated programs such as Head Start and the Portage Home Program emerged. These programs and many others rely upon different educational and therapeutic approaches. These approaches are based on rapidly growing knowledge related to child and family development, disability, and risk factors affecting both the child and his family (Culatta & Tompkins 1999:48).

Other countries in the world have also made different kinds of advancements in the area of providing special services for exceptional individuals in general, and in the field of special education in particular. Services in early intervention are still fairly new, and are undergoing many changes and adaptations in different countries.

In the Arab World in general, and in the Kingdom of Saudi Arabia and its neighboring Gulf countries in particular, providing services for children with special needs has had its fair share of advancements over the last twenty years or more. Special education services in the Kingdom of Saudi Arabia have improved over the years, whether through governmental agencies or private organizations. However, the area of early intervention is still very new. Limited research and written data is available in the Arab Region to help in

verifying the significance of early intervention services to both the child and family in this part of the world.

The current study is performed in the Kingdom of Saudi Arabia. And therefore the researcher focuses on the current situation and status of early intervention services and programs available for children with special need and their families in the Kingdom of Saudi Arabia in particular. The researcher will also generally mentions the situation of such services in some of the neighboring Gulf countries.

1.2 *Background to the problem*

Limited documented data on the subject of special education and early intervention has been found in research done in the Arab World, particularly in the Kingdom of Saudi Arabia and the Gulf countries. Literature in related subject areas such as the education of disabled children (Abdul Wasse 1983, Al-Hoqail 1996, Al-Turaiki,1997, Al-Mossa, 1999)); rehabilitation services (Suliman 1997, Mirza 1992, Moktar 1979); and the effects of parents' observations and assessments on their disabled child (Shawkat 1991, Al-Rawsan 1996, Bin Talib 1990, Al-Hazmi 1988) was available.

This outcome supports the need to do further research in the area of special education and early intervention, and also other related issues such as the effects of the home environment on the exceptional child, parents' involvement in their child's services, parent-child interactions during services offered by the programs, etc.

A brief overview of the status of impairment, history of education and special education services in the Kingdom of Saudi Arabia follows to help in clarifying the importance and significance of establishing early intervention programs, and enhancing the current available services.

1.2.1 History of Education in the Kingdom of Saudi Arabia

Though the Kingdom of Saudi Arabia is considered one of the developing countries by definition, in reality it has progressed significantly in many areas such as education, medicine, and technology. The field of education in general has advanced tremendously over the last 20 years. Education in the school system is segregated by gender. Boys' education from first grade up to high school is provided and supervised by the Ministry of Education. Girls' education from first grade up to high school is provided by the Presidency of Girls' Education. Both these institutions are governmentally operated. All the schools under their supervision provide free public education to all Saudi nationals. Also private schools in the different regions of the country are licensed and supervised by these institutions. The basic curriculum subjects of math, reading, Islamic studies, sciences, and social sciences is the same in both public and private schools. The difference is usually in the extra curricula activities and languages that are offered by the private schools.

Boys' education first started in 1923. Statistics showed an increase in the ratio of elementary boys' schools from 210 in 1950-1951 to 5750 schools in 1998-1999; the number of students increased from 28317 in 1950-1951 to 1048424 in 1998-1999. Table 1.1 shows statistics for progress in boys' elementary education from 1950-1999 (Abdul Wasse, 1983:35-42; & Al-Hoqail, 1996:15; Annual Reports of the Summary of Statistics of Elementary Boys Education 1994-1999, Ministry of Education).

Table 1.1

**STATISTICS OF PROGRESS IN ELEMENTARY BOYS' EDUCATION
(1950 –1999)**

Academic year	Students	School	Classrooms
1950-1951	28317	210	941
1954-1955	49740	446	2070
1959-1960	95960	600	3710
1964-1965	174514	1072	7374
1969-1970	267529	1383	10972
1974-1975	391677	2076	16891
1978-1979	517069	3638	26607
1983-1984	688170	4413	34801
1989-1990	919949	4806	42763
1992-1993	986822	5307	48248
1994-1995	1026842	5404	51580
1995-1996	1058109	5498	52686
1996-1997	1050547	5558	62890
1997-1998	1042501	5626	63071
1998-1999	1048424	5750	53676

(Abdul Wassa, 1983:35-42 & Al-Hoqail, 1996:15, Annual Reports of the Summary of statistics of elementary boys education 1994-1995 up to 1998-1999, Ministry of Education).

Girls' education first started in 1960. There is an increase in the ratio of elementary girls' schools from 15 elementary schools in 1960-1961 to 5768 schools in 1997-1998; the number of students also increased from 5180 in 1960-1961 to 1042731 in 1997-1998. Table 1.2 shows statistics for progress in girls' elementary education from 1960-1998. (Abdul Wasse, 1983:71-79.; Al-Hoqail, 1996:37; The Annual Statistics provided by the Presidency for Girls' Education for the academic years 1994-1995 up to 1997-1998)

Table 1.2

**STATISTICS OF PROGRESS IN ELEMENTARY GIRLS' EDUCATION
1960 –1998**

Academic year	Students	Schools	Classrooms
1960-1961	5180	15	127
1965-1966	50870	160	1623
1970-1971	127131	357	3645
1975-1976	237945	963	8037
1980-1981	344363	1810	14666
1985-1986	555490	3155	25564
1990-1991	760521	3527	33073
1991-1992	792135	3599	34043
1992-1993	820959	3896	39874
1993-1994	1010595	5005	46290
1994-1995	1069526	5379	49649
1995-1996	1081774	5576	51140
1996-1997	1078235	5847	52626
1997-1998	1042731	5768	52018

(Abdul Wasse, 1983:71-79; Al-Hoqail, 1996:37; The Annual Statistics provided by the Presidency for Girls' Education for the academic years 1994-1995 up to 1997-1998)

1.2.2 *An overview of impairments and services provided for special needs children in the Kingdom of Saudi Arabia*

In the following section the researcher aims at giving a brief overview of the latest status of impairments in the Kingdom of Saudi Arabia. In 1992, the Joint Centre for Research in Prosthetics & Orthotics and Rehabilitation Programme in collaboration with the Ministry of Health, administered a national survey on the status of impairment/disability. The project known as: The National Research Project on Disability and Rehabilitation and Community-Based Rehabilitation in Saudi Arabia (1992-1997), was designed to collect information regarding the levels, types, probable causes, and demographic characteristics of impairment/disability in the Saudi population (all ages and sexes). And to know the extent of available facilities for rehabilitation services.

Reports from this survey showed that according to the statistics gathered the population of the Kingdom of Saudi Arabia in 1995 was 18 million inhabitants. The reported number of impaired persons from the total population was 1,218,400 (Al-Turaiki, 1997:17). Which means that approximately 6% of the Saudi population are with an impairment. From the total number of impaired persons, children ages birth to three years old make about 4% of the impaired population (Al-Turaiki, 1997:97).

Table 1.3 shows the type and size of the different impairments that were grouped in the sample for the national study, which represented the Saudi society. In the national study the total sample of persons with impairments were 4866 persons with different types of impairments. Results indicated that the percentage of impairment in the Kingdom of Saudi Arabia according to the representing sample is 3.73% of the total population.

Table 1.3

TYPE AND SIZE OF IMPAIRMENT IN THE CHOSEN SAMPLE THAT
REPRESENTS THE SAUDI SOCIETY IN THE NATIONAL STUDY

Type of impairment	Number	Percentage
Physical impairment	1635	33.6%
Intellectual Impairment	472	9.7%
Social & emotional impairment	131	2.7%
Visual impairments	1455	29.9%
Auditory impairments	519	10.7%
Communication disorders	654	13.4%
TOTAL	4866	100%

(Reproduced from Al-Turaiki, 1997:100)

Persons with physical impairments constitute about 33.6% of the impaired population in the Kingdom of Saudi Arabia, 2% of which are children ages birth to three years old. Persons with intellectual impairments constitute about 9.7% of the impaired population, 5% of which are children ages birth to three years old (Al-Turaiki, 1997:100,108).

In the same survey, reports indicate that the causes for the impairments were categorized under three main categories: biological/hereditary, environmental, and health. Results indicate that for the impaired population ages birth to three years old, biological/hereditary causes ranked number one with 3.8% amongst this age group. Environmental causes ranked second with 1.5%, and health causes ranked the third with less than 1%. One final major reporting of this national survey is the indication of an impairment at birth - with causes that may be related to biological/hereditary, environmental, and/or health conditions. Reports indicate that impairments present at birth constitute about

24.2% of the total number of impairments. Which signifies a correlation between intermarriages and impairments, particularly impairments due to hereditary causes (Al-Turaiki, 1997:118-120).

In the next section, the progress and advancements in the field of special education in the Kingdom of Saudi Arabia is highlighted. There are four governmental Ministries and two private Sectors that supervise different centres and programs for special needs children (Al Maglouth, 1999:51-57) they are:

- 1) *The Ministry of Education*
- 2) *The Presidency for Girls' Education*
- 3) *The Ministry of Labor and Social Affairs*
- 4) *The Ministry of Health*
- 5) *Private and Charity Organizations*
- 6) *The Joint Centre for Research in Prosthetics & Orthotics and Rehabilitation Programmes*

In this study, the researcher will only discuss the first three Ministries, as they are the pioneers and largest service providers of special services for special needs children.

1.2.2.1 **The Ministry of Education:**

The Ministry of Education offers and supervises educational programs for boys from elementary up to high school years, serving both regular and special needs boys, through regular education and/or special education programs. In 1962, the Ministry of Education established the first Department of Special Education under its auspices. This Department supervised the services offered by the different centres that provided special educational services for deaf, blind, and intellectually impaired children. (Al Maglouth, 1999:155). These centres are:

- 1) *The Centres for Mentally Retarded Boys*
- 2) *The Centres for Blind boys*
- 3) *The Centres for Deaf boys*

These centres have branches in most of the major cities in the Kingdom of Saudi Arabia, to provide services for special needs boys and young men.

1). The Centres for the Mentally Retarded

These centres provide services for mentally retarded, educable, and trainable boys' ages six to fifteen years old. Services such as social, emotional, psychological, recreational, educational, and rehabilitation are offered.

2). The Centres for the Deaf

These centres provide services for boys with deafness and hard-of-hearing ages six to eighteen years old. Educational programs from elementary to high school level are offered using sign language and other augmentative communication systems.

3). The Centres for the Blind

These centres provide services for boys with total blindness and for those boys who have sight of 6/60. Educational programs from elementary to high school level are offered using the Braille system.

Table 1.4 shows the progress and advancement of special education services offered by the centres under the auspices of the Ministry of Education (1958-1999).

Table 1.4

**THE PROGRESS AND ADVANCEMENT OF SPECIAL EDUCATION
SERVICES PROVIDED BY THE CENTRES UNDER THE AUSPICES OF
THE MINISTRY OF EDUCATION (1958-1999).**

Year	Project
1958	Teaching 100 blind children in a school – in Riyadh
1960	The first Centre for the Blind was established – in Riyadh
1962	The first Department for Special Education services was initiated
1964	The first Centre for the Deaf was established in Riyadh
1971	The first centre for the Mentally Retarded was established in Riyadh
1992	The number of centres offering services for special needs children is 54
1995	The first 3 public schools providing Resource Room facilities for learning disabled boys Riyadh
1998	The number of centre providing services for learning impaired children is 65
1999	The number of centres offering special services is 226

(Al-Hoqail 1996; Al-Maglouth 1999:155-168; & Al Mossa, 1999:145,160).

The first centre for the Blind opened back in 1958; the first centre for the Deaf opened in 1964; the first centre for the Mentally Retarded opened in 1971. In 1992 the number of governmental centres serving children with blindness, deafness, and with mental retardation increased to 54 centres around the

Kingdom of Saudi Arabia. In 1999 the number of centres and programs offering different special educational services under the Ministry of Education and the supervision of the General Secretariat of Special Education increased to 226 centres. (Al-Hoqail 1996; Al-Maglouth 1999:155-168).

In 1983, the name of the Department of Special Education was changed to the General Secretariat of Special Education (Al Mossa, 1999:34). According to the latest report by the General Secretariat of Special education, in addition to providing special services for the blind, deaf, and intellectually impaired children the following population of special needs children are also provided with services (Al Mossa, 1999: 37-38):

- 1) Hearing impaired children
- 2) Visually impaired children
- 3) Learning impaired children
- 4) Multiply disabled children
- 5) Behaviorally and emotionally disturbed children
- 6) Autistic children
- 7) Children with communication disorders
- 8) Children with physical and motor impairments

According to the latest statistics offered by the General Secretariat of Special Education in 1996 the total number of centres providing special services were 67 centres. In 1999 the total number of centres increased to 226 centres and programs serving 13914 special needs children in the different regions of the Kingdom of Saudi Arabia (Al Mossa, 1999:161).

Table 1.5 shows the different impairments served and supervised by the General Secretariat of Special Education under the auspices of the Ministry of Education, with the latest statistics about the numbers of centres, and students served (Al Mossa, 1999:161)

Table 1.5

POPULATION SERVED AND THE NUMBER OF CENTRES AND
STUDENTS SUPERVISED BY THE GENERAL SECRETARIAT OF
SPECIAL EDUCATION UNDER THE AUSPICES OF
THE MINISTRY OF EDUCATION
UP TO 1999

Population served	Number of Centres/Programs	Number of students served
Hearing Impairment:		
1) Deaf	45	2812
2) Hearing impaired	11	362
Visual Impairment:		
1) Blind	21	659
2) Visually impaired	1	2000
Intellectual Impairment	70	4338
Physical & Motor impairment	1	1642
Multiple Impairments	3	29
Autistic	5	42
Learning Impairment	68	1670
Gifted & Special Talents	1	360
TOTAL	226	13914

(Al Mossa, 1999:161)

1.2.2.2. The Presidency for Girls' Education:

The Presidency for Girls' Education is responsible for providing educational programs for girls from elementary to high school years. And also supervise the educational programs for the public and private schools. In 1993 the supervision of the special education programs for the girls was assigned to the Presidency. Before that all the special education services and programs

were under the responsibility and supervision of the Ministry of Education. The Presidency for Girls' Education now provides services for the special needs girls through the different centres that serve the mentally retarded, the blind, and the deaf. These centres have branches in most of the major cities in the Kingdom of Saudi Arabia.

Table 1.6 shows the progress and advancement of the special educational services offered by the centres under the Presidency for Girls' Education (1993- 1998). (Al-Hoqail 1996; Al-Maglouth 1999:155-168).

Table 1.6

THE PROGRESS AND ADVANCEMENT OF SPECIAL EDUCATION
SERVICES PROVIDED BY THE PRESIDENCY FOR GIRLS' EDUCATION
(1993-1998)

Year	Project
1993	Started the supervision of special Education Programs for girls
1994	The number of centres offering services is 28
1997	The number of centres offering services is 35
1998	The first 6 public schools start providing Resource room facilities for learning disabled girls in Riyadh and Jeddah

1.2.2.3 The Ministry of Labor and Social Affairs:

The Ministry of Labor and Social Affairs supervises programs and services that are provided by different charity organizations licensed to operate programs for poor families, orphanages, centres for the delinquents, and special needs children. Programs such as rehabilitation, and training for daily living skills, as well as community services are among a few of the services

offered to the special needs children. The different centres under the auspices of the Ministry of Labor and Social Affairs provide therapeutic, educational, psychological, rehabilitation, social, and technical aids for the special needs children and individuals in need of the service.

In 1972, the Ministry of Labor and Social Affairs established the first centre for vocational training. In 1976 the first centre for social rehabilitation for individuals with severe impairments was opened in Riyadh. In 1990 the first daycare rehabilitation centre for special needs children was established in Riyadh. By 1998 the number of centres providing different rehabilitation, social and/or vocational services under the auspices of the Ministry of Labor and Social Affairs had increased to 33 centres (Al-Maglouth, 1999:172-192)

Table 1.7 shows the progress and advancement of the different rehabilitation and social services provided for special needs children and adults by the Ministry of Labor and Social Affairs (1972-1998). (Al-Hoqail 1996; Al-Maglouth, 1999:172-192)

Table 1.7

THE PROGRESS AND ADVANCEMENT OF REHABILITATION,
 VOCATIONAL, AND SOCIAL SERVICES PROVIDED BY
 THE DIFFERENT CENTRES UNDER THE AUSPICES OF
 THE MINISTRY OF LABOR AND SOCIAL AFFAIRS
 (1972 –1998)

Year	Project
1972	The first centre for vocational training was established
1974	The first Rehabilitation centre for boys was established in Riyadh
1975	Established the first Vocational Department
1976	The Social Rehabilitation Centre for the Severely Disabled was established in Riyadh
1977	The Rehabilitation Centre in Dammam was established
1978	The Polio Centre was established in Riyadh
1979	The first Rehabilitation Centre for Girls was established in Riyadh
1990	The Daycare Centre for Special needs children was established
1998	The number of centres providing services are 33 centres

(Al-Hoqail 1996; Al-Maglouth, 1999:172-192)

1.3 *Exploration of Problem*

The field of special education has undergone many changes over the past two decades. This is mainly due to two significant points: 1) the awareness of families of their rights to be involved in the decision making process for the type of services offered to their exceptional child. 2) The ever-changing legislation linked to the appropriate services offered to the exceptional individuals and their families (Culatta & Tompkins 1999:13).

The controversy about the relationship between special and general education versus early intervention services has made teachers and other professionals more aware of the educational problems. These problems include issues such as deciding which children should be taught specific curricula, or receive special attention/services, and where and by whom these services should be provided (Kauffman & Hallahan, 1994:29).

1.3.1 *A Review of Special Education in the USA*

As the United States of America is one of the leading countries in the world in advancements in the field of special education, a quick overview of their history in this field will help in shedding the light on the progress and legislation that have evolved over the past twenty years, which has helped them in reaching the stage that they are currently at.

1.3.1.1 The changes in Legislation

Up to the early 70s children with impairments in the United States were excluded from regular schools and directed to special schools/centres for specialized services. However, with the passage of the *Education for All Handicapped Act* known as PL 94-142 in 1975, which was re-titled to the *Individuals with Disabilities Act* (IDEA), the status and services for special needs children changed. The effect of this law was revolutionary because it was the first federal law that mandated free appropriate public education for

all children with impairments. This law governs eligibility for special education services, individualized education programs (IEPs), the requirement that children be served in the least restricted environment, to provide related non-educational services, and parental rights (Culatta & Tompkins 1999:15).

But gradual changes in parents' roles in the service system culminated in the amendment of *The Individuals with Disabilities Act* PL 94-142 to PL 99-457 in 1986 which extended its provisions to infants and toddlers from birth to age three. The passage of PL 99-457 (*The Individuals with Disabilities Act*) under the same title, lowered the age of eligibility for special education and related services for all children with impairments to age three. The amendment to the *Individuals with Disabilities Act* law ensured that all children ages birth to twenty one have the right to a free and appropriate public education regardless of the nature or severity of their impairment.

PL 99-457 (*The Individuals with Disabilities Act*) also established the *Handicapped Infants and Toddlers Program (Part H)*. This program is directed to the needs of children from birth to three years of age who may need early intervention services. Under this program, the infant or toddler's family may receive services needed to assist them in the development of their child's skills. This law also provides incentives for states to develop early intervention programs for infants with known impairments and those considered at risk (Culatta & Tompkins 1999:18).

PL 99-457 (*The Individuals with Disabilities Act*) enforced two very important areas. First it extended the mandate for full service under (*Part B*) to 3-year-olds by 1992 and increased funding for preschool services through the Preschool Grant Program. Second, it established a new program for infants, toddlers, and families (*Part H*), which had a full service goal for infants aged birth through two years. Part H enforced and mandated *family-focused* as opposed to *child-focused* early intervention services. It allowed the family more say in the planning process of their disabled child's program, through the implementation of the *Individualized Family Service Plan (IFSP)*. Part H was created with the recognition of the multiple needs of children and their

families, as well as the emphasis on the multiple service systems that existed to address these needs (Hallahan & Kauffman 1997:34-39)

These two landmark federal acts that were passed by 1990, altered PL 94-142 (*The Individuals with Disabilities Act*) in many significant ways. As a consequence, the scope of family services considered appropriate for early intervention and young infants was radically reformulated. In addition, conceptualizations about the manner that service providers should interact with impaired individuals and their families became apparent. (Hallahan & Kauffman 1997:30-34).

Before the inception of PL 99-457 (*The Individuals with Disabilities Act*), most early intervention practices centred around the child. Families were regarded as part of the problem rather than allies of professional interventionists. But the growth of family-centred philosophies and practices has required professionals to change their view of parents and other family members. In a study by Mahoney and Filer (1996:42), the authors stated that:

"Children should be placed in the least restrictive environment, and emphasis should be on 'family-focused' as opposed to 'child-focused' early intervention services to ensure appropriate learning opportunities for these children".

In 1990, the authorization of the amendment to the Individuals with Disabilities Act through the newer law PL 102-119 (*Early Intervention Programs for Infants, Toddlers, and Preschoolers With Disabilities Act*) was enforced. Many states were required to implement early intervention services for special needs children and their families. This newest amendment primarily addressed the Part H program, known as the *Early Intervention Program for Infants and Toddlers with Disabilities*. The Individuals with Disabilities Act makes it possible for states and localities to receive federal funds to assist in the education of infants, toddlers, preschoolers, children, and youth with impairments. Grants were also offered to some programs by the Federal Government to aid service providers in offering these exclusive services (Culatta & Tompkins 1999:18-19).

The enforcement of this amendment to the law had a great impact on the types of services provided for exceptional infants and children and their families. This amendment also helped in signifying the rights of the families in choosing the goals and plans of services provided for them and their child through the implementation of the *Individualized Family Service Plans* (IFSPs). Parents' rights to participate in every decision related to the identification, evaluation, and placement of their child with an impairment was enforced.

In 1997, both houses of Congress re-authorized the *Individuals with Disabilities Act (IDEA)* and President Clinton signed it into law. The most noteworthy features of this re-authorization process was in emphasizing the importance of certain issues such as discipline, the Individualized Education Plan (IEP) modifications, mediation, funding, and professional development. These issues are of primary focus to professionals in the field of special education in the United States in the new millennium (Culatta & Tompkins 1999:20-21).

1.3.2 Early Intervention in the Kingdom of Saudi Arabia:

Regular educational programs for preschoolers in the Kingdom of Saudi Arabia are provided for normal children only. The first preschool programs were established in 1978. From the statistics provided by the Presidency for Girls' Education, the total number of preschools was then 58 schools, serving 12784 children, with 379 classrooms. These numbers have increased to 961 preschools, serving 93481 children, with 5013 classrooms in the year 1997 (Al-Hoqail, 1996:35; The Annual Statistics provided by the Presidency for Girls' Education for the academic years up to 1997-1998).

From the above stated figures the significance and need of providing early learning opportunities for the growing number of young children in the Saudi population seems quite evident. As a counter part of the argument it seems also quite fair to assume the significance of providing early educational and learning opportunities for the Saudi special needs children.

Special services for children with impairments requires the involvement of professionals from different disciplines such as medical, educational, therapeutic, and rehabilitation, to work together to provide appropriate and individualized services for these children and their families. Current available services and programs providing services for very young infants and children with impairments are very limited. Most governmental centres offer services for special needs children who have a chronological age of above five years. Very few private centres offer services for exceptional infants and children.

Programs for special needs infants and children below three years old are very scarce. The National Research Project provided statistics about the numbers of Saudi impaired and special needs individuals in the Kingdom of Saudi Arabia. The figures derived from the National study helped in identifying the numbers of infants and toddlers with impairments in the Saudi population.

Table 1.8 helps to show the percentage of Saudi infants and children who are below three years old under the different types of impairments. The percentages of children under every type of impairment, is calculated from the percentage of the total population of impaired individuals under any one type of impairment (Al-Turaiki, 1997:100-114).

Table 1.8

**TYPES OF IMPAIRMENTS AND THE PERCENTAGE OF IMPAIRED
INFANTS AND CHILDREN BELOW 3 YEARS OLD
IN THE SAUDI POPULATION**

Type of Impairment	% of the total population of impaired individuals	% of infants and children under three years of age
Physical impairment	33.6%	2%
Intellectual impairment	9.7%	5.3%
Blind/Visual impairments	29.9%	1.6%
Deaf/Auditory impairments	10.7%	2.4%
Speech/Communication problems	13.4%	4.2%
Social/Emotional problems	2.7%	3.1%
TOTAL	100%	18.6%

(Al-Turaiki, 1997:100-114)

From the above mentioned figures it becomes very apparent that there is a definite need to provide special services for young infants, toddlers, and children with different types of impairments/disabilities.

The review and comparison of the history and current situations about the status of special education and related services offered to special needs children and their families in the Kingdom of Saudi Arabia and the United states of America, it seems quite evident that change and progress has evolved over the years. But the need to advance and improve the quality and quantity of services provided for special needs children and their families in the Kingdom of Saudi Arabia seems necessary to accommodate . Also the importance of providing early intervention services for infants, toddlers, and preschoolers with impairments seems very significant as well.

1.4 Awareness of problem

In the last five years a few centres in the Kingdom of Saudi Arabia and the Gulf Countries have realized the importance of early intervention services for the very young special needs children and their families. Which has resulted in the provision of early intervention services by a few of the more advanced organizations in some of the major cities.

The centres that have started providing such service are quite limited. Although these centres have only been providing early intervention service for the last five years, no descriptive data is yet available. Therefore, the need arises to perform a study on the effects of early intervention services on the mothers' needs. The present study aims to find out if there is any relationship between the mothers' needs and the current available early intervention services. (See appendix 1 for a listing of the centres offering early intervention services in the Kingdom of Saudi Arabia and the Gulf).

In the mean time, it is crucial to refer to and use data and research done in other countries in the world, especially those countries that are considered pioneers in this field such as the United States and some of the European countries. This will help in realizing the significance of early intervention services and the need to establish centres that provide such services for these children with special needs and their families.

1.5 Formulation of Problem

From the review of the literature it is apparent that services for the very young special needs children is very limited in the Kingdom of Saudi Arabia and its neighboring Gulf countries. Therefore, it is crucial to put forward a study that will signify the importance of providing early intervention services for children with special needs and their families. The following issues and questions will be discussed in order to arrive at appropriate conclusions and

recommendations suitable for signifying the importance of establishing early intervention programs in the Kingdom of Saudi Arabia and the Gulf.

- 1) What is the significance of early intervention services to exceptional children and their parents/mothers?
- 2) What are the types of early intervention services available in the Kingdom of Saudi Arabia?
- 3) How can the currently available early intervention programs in the Kingdom of Saudi Arabia be effectively utilized?
- 4) What are the objectives of early intervention services?
- 5) Is there a relationship between mothers' needs and the socio-economic background of the family?
- 6) Do currently available early intervention services in the Kingdom of Saudi Arabia meet the needs of mothers of special needs children?
- 7) Who are exceptional children? What are the services offered for exceptional children?
- 8) What are the different types of exceptionalities and how can the early intervention services be suited to the needs of children with different impairments or exceptionalities?
- 9) What are the causes and characteristics of the different exceptionalities?
- 10) Does the type of impairment have an effect on the benefits gained from participation in an early intervention program?

1.6 Goals of the Research Project

The limited availability of established early intervention programs in the Kingdom of Saudi Arabia, signifies the need to perform a study that aims at identifying the importance of early intervention services for children with special needs and their families. The researcher aims at establishing the need for such services and programs; and to identify the relationship between the needs expressed by the mothers of special needs children and the presently available services. The following goals will help highlight the main issues in this study:

- 1) To discuss the nature of early intervention services and their relevance to exceptional children and their parents/mothers.
- 2) To discuss the benefit of effectively utilizing the experiences from the currently available early intervention program.
- 3) To identify the relationship between the needs of the mothers of intellectually and physically impaired children and the socio-economic background of the family.
- 4) To identify the relationship between the needs of mothers of children with intellectual and physical impairments and the current early intervention services available in the Kingdom of Saudi Arabia.
- 5) To discuss the different types of exceptionalities, with special reference to intellectual and physical impairment, and to indicate their implications for early intervention services for young special needs children.

1.7 Definition of Concepts

In the light of the problem and aims of this study, it is important to clarify and define some concepts that are used repeatedly in this study. There are

different terms, concepts, phrases, and words used throughout the chapters. The following section will list these concepts and define them, to help in clarifying their meaning. Researchers such as: Hallahan & Kauffman 1997, chp 1; Darling & Baxter 1996, chp1; Turnbull, Turnbull, Shank, & Leal , 1999, Culatta & Tompkins 1999, chp1&2, stated some of these definitions. Although there are many more authors and definitions, the researcher will for the purpose of this study, use the following definitions for the concepts indicated.

1.7.1 Disability

Disability refers to the reduced function or loss of a particular body part or organ (Culatta & Tompkins, 1999:40).

1.7.2 Handicap

Handicap refers to a limitation that individuals with impairments or disabilities have in their environments (Culatta & Tompkins, 1999:40).

1.7.3 Impairment

In South Africa, the term impairment replaces the former terms of: handicap, disability, learners with special needs, exceptional children, learners with barriers to learning, and exceptional learners. According to this approach a person becomes disabled when their particular learning needs are not matched as a result of certain barriers in the environment, that may prevent learning from taking place. In the USA and Saudi Arabia the term disability is still being used. The term impairment will be used in this study to refer to children who have health, mental, and physical disorders who need adaptations in their environment, schooling, and daily living. Some of the former terms will be used when referring to definitions or citations still using any of the above mentioned terms (Disability Policy of UNISA, Draft 1)

1.7.4 Special Education

Special education refers to providing specially designed instructions that meet the different needs of exceptional individuals through the use of adapted educational materials, equipment, facilities, and individualized teaching techniques (Hallahan & Kauffman, 1997:14).

1.7.5 Early Intervention (EI)

Early intervention refers to the process of providing support services for families of exceptional and At-Risk children by intervening as early as possible to help educate the families in dealing with and handling their disabled child in order to lessen the problems associated with the disability (Hallahan & Kauffman, 1997:71).

1.7.6 Exceptionality

Exceptionality refers to the differences in abilities or disabilities of individuals that may either positively or negatively effect their performance in their immediate environment (Hallahan & Kauffman, 1997:4).

1.7.7 Special needs children

Special needs children is a new term referring to the exceptional child who needs special services in order to show his/her ability (Council for Special needs children, 2000; Du Toit, 1996, Study guide 2). This term refers to children with diverse characteristics who require special individualized education and other related services if they are to realize their full human potential (Hallahan & Kauffman, 1997:7).

1.7.8 Least Restrictive Environment

Least restrictive environment is a legal term referring to the fact that special needs children must be educated in as normal an environment as possible (Hallahan & Kauffman, 1997:18).

1.7.9 Individualized Education Plan (IEP)

The Individualized Education Plan is a written agreement between the parents and the school about what the child needs and what will be done to address those needs (Hallahan & Kauffman, 1997:35).

1.7.10 Individualized Family Service Plan (IFSP)

The Individualized Family Service Plan is a written plan serving infants and toddlers, ages zero to three, and their families (Turnbull, Turnbull, Shank, & Leal, 1999:27).

1.7.11 Inclusion

Inclusion is the process by which children with special needs receive remedial services in the least restrictive environment, especially in the regular classroom. Inclusion presupposes collaboration between special educators and regular classroom teachers (Culatta & Tompkins, 1999:40).

1.7.12 At Risk

The term At-risk refers to children who have been subjected to certain adverse genetic, prenatal, perinatal, postnatal, or environmental conditions that are known to cause some defects or abnormalities to the child and may hinder the developmental process of the child (Culatta & Tompkins, 1999:3).

1.7.13 Needs

The researcher uses the term 'needs' throughout the study to refer to different requirements that mothers either want to have or want to do in order to accommodate their special needs child's situation.

1.7.14 Intellectually impaired

The term intellectually impaired has replaced terms such as: idiot, retarded, and mental retardation. In this study the researcher uses this to refer to individuals who have an intellectual deficiency that

effects their learning process and renders them in need of special services adequate to their intellectual level of understanding.

1.7.15 Physically impaired

The term physically impaired refers to children whose physical limitations may interfere with school attendance or learning to such an extent that special services, training, equipment, materials, or facilities are required in order for them to function within their limitations and abilities(Hallahan & Kauffman, 1997:396)

1.8 Design and Methodology

The study was conducted with the aim of exploring the needs of the mothers of children with intellectual and physical impairment , and relating them to the current programs providing early intervention services in Kingdom of Saudi Arabia and the Gulf countries.

1.8.1 Design of the study

This study is a combination of a literature review of the current special education services and a descriptive and empirical research study. A survey was implemented with a sample of 27 mothers of young children with intellectual and physical impairment. These mothers and their children were associated with The Help Centre, which is the only centre in the Western region of the Kingdom of Saudi Arabia that offers early intervention services. Three questionnaires were formulated and distributed to obtain information about the following issues: 1) The current early intervention services available for young special needs children in the Kingdom of Saudi Arabia and the Gulf countries. 2) The background history of the families of the sample. 3) The needs of the mothers in the sample.

1.8.2 Methodology

Following is a brief description of the three questionnaires used in this study:

- 1.8.2.1 **The Questionnaire of Family's Background Information:** A descriptive questionnaire designed to obtain background information about the family's social and financial situation. This questionnaire attempted to highlight the background of the family in order to help in determining relevant factors that may influence the needs of the mothers (See Appendix B for sample questionnaire)
- 1.8.2.2 **Mother's Need Questionnaire:** A questionnaire with a 3-point ordinal-scale was designed to help in finding out the different needs of the mothers in accordance with their problems and priorities; and to identify if there is a relationship between the mothers' needs and the current available early intervention services. The Mothers' Needs Questionnaire was adapted from the original Parents Needs Survey developed by Darling (1990). The 3-point Likert scale was used to allow more range in the responses to the degree of need (see Appendix C for sample questionnaire).
- 1.8.2.3 **Questionnaire for Early Intervention Programs:** A descriptive questionnaire designed to collect data about the services provided by the current early intervention programs in the Kingdom of Saudi Arabia and the Gulf. The questionnaire attempted to collect data to help correlate between the needs of the mothers with the current early intervention services available for special needs children and their families. (see Appendix D for sample questionnaire)
- 1.8.3 **Statistical Analysis**

The research study used a combination of descriptive and qualitative analysis to relate the findings to the questions formulated for the study. The data collected from the questionnaires is expressed in terms of frequencies and

percentages to assist in making comparisons and establishing relationships between various variables.

1.9 Program of Study

The following is a synopsis of the information covered in the different chapters of the present study.

- **Chapter 1:** Gives the introduction, statement of the problem, and aim of the study. An overview of the status of special education and early intervention programs and services in the Kingdom of Saudi Arabia, the Gulf countries, and the United States of America is established. It serves as introduction to the formulation of the research problem. The aim and goals of the study is identified. A brief description of the method of study is presented. Major concepts relevant to the study are defined.
- **Chapter 2:** Gives an explanation and discussion of the different types of exceptionalities in general with focus on intellectual and physical impairments. Highlights issues that help in establishing the significance of early intervention services for special needs children. Establishes any relevance between the type of impairment and the need for early intervention services.
- **Chapter 3:** Investigates the subject of early intervention, its history, current trends, rationale and objectives. A brief discussion of early intervention programs in the Kingdom of Saudi Arabia and the Gulf countries is drawn. A comparison between family-focused vs. child-focused services, and home-based versus. centre-based intervention services is presented. The needs of the child, the mother, and the family are discussed. Service coordination and variables affecting the child's development are discussed in reference to the relevance and provision of early intervention services.

- **Chapter 4:** Covers the empirical part of the study, the methodology and procedure of implementing the study. Explores and discusses the methods used in the study to collect and gather data about the sample in the study, and the current programs offering services for special needs children. Describes the questionnaires designed and formulated to help in processing and interpreting the results in order to find out the relationship between the formulated problems stated in the study.
- **Chapter 5:** Describes and discusses the experimental design of the study. Reporting of the results and findings of the questionnaires are set in tables and graphs. Discussion of the interpretation and analysis of the accumulated data from the findings.
- **Chapter 6:** Discussions of the implications drawn from the findings of the investigation. Discussions of the biases drawn from the study. Summary and conclusions reached based on the results of the findings from the current study. Recommendations for future studies.

The next two chapters will give a broad review of the literature on the different types of exceptionalities and early intervention services. Chapter two will discuss the different exceptionalities to assist in identifying the different types of impairments and the needs of these children. Chapter three will give a review of early intervention programs and the status of special services for young children in the USA, the Kingdom of Saudi Arabia and the Gulf Area to identify the types of services offered, and the actual services provided. Special emphasis will be on investigating the needs of the mothers in order to establish the relationship between the needs of the mothers of the special needs children in the sample and the current available early intervention services.

CHAPTER 2

The Different Exceptionalities and their Implications on Education and Teaching

2.1 *Introduction*

The literature review in chapter one has helped to shed light on the history and development of special education over the last twenty years in the United States of America and in the Kingdom of Saudi Arabia. Also the review of the evolvement of the different legislation over that same period of time has helped in highlighting the laws that have affected the advancement of special education services and programs, and have set the stage for future advancements in this field.

From the cited literature review, it became rather apparent that a paradigm shift has taken place in the United States of America regarding children with exceptionalities. Before legislation in 1975, students were always integrated within the general classroom, unless their impairments were so severe that they were institutionalized. In fact, it was not until the *Education for All Handicapped Children Act* (PL94-142) was introduced that the education for students with impairments started changing. With the re-entitlement of the law to the *Individuals with Disabilities Education Act* (IDEA), the concept of least restrictive environment became of significance (McCarthy, 1998:116)

In this chapter, the different types of impairments will be discussed in general. But more emphasis will be on intellectual and physical impairment as these two impairments are the primary focus of the current study. For the purpose of the study, the researcher intends to give an overview of the different impairments and not to cover all the aspects in depth.

The researcher hopes to answer to one of the main questions in the formulation of the study, *does the type of impairment have an effect on the benefits gained from the participation in an early intervention program?*

In theory all and any students are to be given equal educational opportunities. This law emphasized the concept of least restrictive environment, which gave students with disabilities a chance to be with their peers as much as possible. Least restrictive environment favored integration but allowed for segregation, depending on the degree of the disability and the services available. But it is very difficult to distinguish between the children's rights versus their needs (Elliott & McKenney, 1998:54).

The outcomes of special education programs over the years indicate that these segregated services alone are not working. Children served in special education programs have not made expected progress in academic, social, or vocational areas (Roger, 1993:2). To be segregated from age level peers, work with different curriculum and materials, and be excluded from some activities did not benefit these children. In fact some studies have proven some negative effects on students' self esteem, self-confidence, and lack of bonding with teachers and peers (Biklen, 1985:24 -35).

Under the Individuals with Disabilities Act, regulations allow children to be placed in special education classes or separate facilities "only when the nature or severity of the disability is such that education in regular classes with the use of supplementary aids and services can not be achieved satisfactorily" (McCarthy, 1998:117).

In the 1990s, the term "*inclusion*" although not mentioned in the federal law, became a popular term that refers to:

"...placing students with impairments in the regular classrooms of their home school with their age and grade peers to the maximum extent possible..."inclusion means bringing support services to the child rather than moving the child to the segregated setting to receive special services..." (McCarthy, 1998:117).

Prior to discussing the issue of inclusion of exceptional children in any educational program, it is necessary to define what is meant by the term '*disability*'. A review of the different types of impairments is also necessary to help in defining and identifying the different impairments, in order to emphasize the importance of early intervention services for exceptional children and their families.

2.2 *Defining disability and impairment*

A distinction must be made between *disability* and *handicap* before defining what is implied by disability. A disability is "...*an inability to do something, or a diminished capacity to perform in a specific way...*". A handicap on the other hand "...*is a disadvantage imposed on the person...*" (Hallahan & Kaufman, 1997;7).

There have been numerous attempts at defining disability. Culatta and Tompkins (1999:2) defined disabled individuals as "...*those who have problems or weaknesses in their intellectual or physical functioning that hinders them from living a normal life...*".

In the report submitted by the National Commission on Special Needs in Education and Training (NCSNET) and the National Committee on Education Support Services (NCESS) in South Africa, disabled individuals were defined as '*exceptional learners*' (Department of Education, 1998:18). The NCSNET/ NCESS report also mentioned that for learners with any type of disability, learning breakdowns occur when their particular learning needs are not matched as a result of certain barriers in their learning environment, which may prevent effective learning from taking place. Also Learners with Disabilities were defined as: "*the group of learners with physical, sensory, intellectual or multiple impairments, etc. ...may require specialized equipment or teaching support in order to access the curriculum and participate effectively in the learning process*". Disabilities may also prevent the learner

from engaging within the norm in structured learning and development, rendering the learner unable to participate in an ideal process of learning (NCSNET/NCESS report 1998:18).

According to the Disability Policy and Plans established by University of South Africa (UNISA) a disability is seen as: "*the inability to function normally due to lack of a specific capacity*". An impairment is seen as: "*a difference of body structure or physiological function, including mental function. These impairments are usually listed and categorized as mobility, visual, hearing and mental impairments (manifested in all sorts of learning difficulties and behavioral disorders) as well as chronic health conditions such as HIV/AIDS, Diabetes, heart conditions, etc.*"

The UNISA definition of disability is: "*a barrier to learning and development. These barriers are caused by social-political factors related to the curriculum and management, which prevent/restrict/constrain/exclude learners/ with impairments from full and equal participation / equal educational opportunities at institutions*".

The Union of the Physically Impaired Against Segregation (UPIAS) in the United Kingdom defines impairments as: "*lacking part or all of a limb, organ or mechanism of the body*"; and disability as: "*The disadvantage or restriction of activity caused by a contemporary social organization which takes no or little account of people who have impairments and thus excludes them from participation in the mainstream of social activities*".

The newer out look is no longer on the impairment of the child but more so on the child's abilities and functions when compared to his/her normal peers (Hallahan & Kauffman, 1997:9-11). The words handicapped, or disabled have long been replaced with the newer phrases "*exceptional children*", "*exceptional learner*", "*learners with special educational needs*" and "*learners experiencing barriers to learn*" (Hallahan & Kauffman 1997; Lyon 1996; and the NCSNET/NCESS report, 1998). Any child could be exceptional in his or her own skills, abilities, and/or needs whether these are considered strengths

or weaknesses, positives or negatives. In the present study, the concept "learners with impairments" will be used through out the chapters to refer to children who need special services to help them interact and learn from their environment in the least restrictive manner.

2.3 Exceptional Children

There have been various attempts at defining the term "*exceptional children*". While some use it to define the particularly bright child or the child with unusual talent, others use it to refer to any atypical or deviant child. Hallahan and Kauffman (1997:7) identified exceptional children as: "*...those who require special education services and related services if they are to realize their full human potential* "

Culatta and Tompkins (1999:3) mentioned that children display a wide variety of physical, emotional, and learning difference. "*A child who differs from the norm to such an extent that certain specialized and individualized educational programming is required to meet that child's unique needs, is considered an exceptional child* "

2.3.1 Definitions of Exceptional Children

There have been numerous definitions of exceptional children, and there is no one right or better definition. An older definition by Kirk and Gallagher (1983:4) seems to cover in very broad terms what exceptionality implies:

" An exceptional child is defined as the child who deviates from the average or normal child: 1) in mental characteristics, 2) in sensory abilities, 3) in neuro-motor or physical characteristics, 4) in social behavior, 5) in communication abilities, or 6) in multiple handicaps. Such a deviation must be of such an extent that the child requires a modification of school practices, or therapeutic services, to develop to maximum capacity ".

An exceptional child is a learner who has individual differences and needs modifications of educational practices. Exceptional children differ in some

important aspects from others in their age groups; they also differ within themselves in their patterns of development. The new outlook is now to deal with the exceptional child as a unique child with individualized abilities, needs, and differences (Heward, 1996:18).

2.3.2 Special considerations in educating exceptional children

All children not only differ from each other individually, but also have differences in their abilities and disabilities within themselves (*intra-individual differences*). The degree of deviation and constellation of differences vary with each child. There are no two same children who have the same constellation of differences. There are minor differences that are accepted in the rubric of 'normal', anything outside of this range differs from the majority in one or more learning characteristics, and therefore creates a different cluster or grouping that have similar differences in a certain disability area.

Children are considered educationally exceptional only when it becomes necessary to alter the educational program to meet their needs. Hence, the use of the term exceptional children in education may differ from its use in other disciplines such as medicine, psychology, sociology, etc. Children are educationally exceptional if their development deviates in kind and degree to such an extent that they require provisions not needed by most normal children to ensure maximum intellectual development.

Every child has *inter-individual* and *intra-individual* differences that form and also influence their personality (Bailey & Harbin, 1980:592). By looking at the inter-individual and intra-individual differences that exceptional children face, it will help to better understand and relate to these children's needs.

In many respects, the intra-individual differences (which are those developmental patterns that cause youngsters to show marked differences within themselves in their physical, social, and intellectual growth) may pose more problems for a mother and or teacher. They require more adaptations of a child's educational program than the inter-individual differences (which are

those developmental patterns that show marked differences when compared with their peers).

By emphasizing and focusing-in on the intra-individual differences and applying this concept to various populations of exceptional children, the attempt is to supply an integrated element that gives meaning to both the differences and similarities among these children. Suitable adaptations and modifications may be required of educational practices, which are offered for every population within a common framework of the curriculum. Certain changes in the curriculum content, skills, and learning environment may be required to provide appropriate services for every group of exceptionality.

Three major types of modifications can be made in the regular education environment to adapt instruction to the inter-individual and intra-individual differences found in exceptional children (Bailey & Harbin, 1980:598):

1. The *content* of the lessons can be adapted to the specific knowledge that is taught.
2. The *skills* that a teacher wants a child to acquire can be adapted by increasing or decreasing the skill according to the child's abilities and needs.
3. The *learning environment* can be modified to enhance and allow for the child's involvement.

2.3.3 Special considerations in grouping exceptional children

The field of special education, unlike regular education takes into account the *inter-individual* and *intra-individual* differences of the exceptional child. Special education is built on the assumption that the majority of students are provided with an appropriate educational program in the regular school setting. Therefore, it is only right to expect that all exceptional children while grouped in different groupings according to their disability are still entitled to the most appropriate learning environment, which suits both their inter-individual and intra-individual differences.

Exceptional children are usually grouped together in different groupings depending on the similarities in the disability to allow for the organization of special remedial programs or services. The concept of inter-individual differences is used to help in the classification and the grouping of children in special classes or ability groups. The concept of intra-individual differences, on the other hand, is used to organize an instructional program for a particular child in conformity with strengths and weaknesses, without regard to how he/she compares with the other children.

In an older research attempt by Kirk and Gallagher (1983:5) children of like characteristics were grouped for instructional purposes in the following typical groupings which is still sometimes used:

1. *Mental deviations*: include children who are (a) intellectually superior, or (b) slow in learning ability.
2. *Sensory handicaps*: include children with (a) auditory impairment, or (b) visual impairment.
3. *Communication disorders*: includes children with (a) learning disabilities and (b) speech and language disorders
4. *Behavior disorders*: includes children who are (a) emotionally disturbed and (b) socially maladjusted
5. *Multiple and severe handicaps*: includes various combinations of mental, physical, motor, sensory problems, and intellectual disabilities.

In Kirk and Gallagher's groupings, *motor handicaps* were not mentioned as a group by its own, but were included under multiple handicaps. Groupings such as those defined by Kauffman and Hallahan (1997:14-18), and in DuToit (1996:2-5), impairments were categorized under the following groupings, to help in better identifying and providing adequate services for exceptional children:

1. *Physical impairment*: congenital, acquired, or hereditary
2. *Epilepsy*: convulsions or seizures
3. *Cerebral disability*: paralysis, damage to the motor system, brain trauma coordination problems.

4. *Learning impairment*: brain dysfunction, brain damage
5. *Intellectual disability*: intellectual impairment, adaptive behavior impairments
6. *Hearing and auditory disability*: hearing loss, deaf, partial hearing
7. *Visual disability*: defective visual function, partial vision loss, legal blindness, total blindness
8. *Multiple disability*: combination of disabilities, such as: cerebral and intellectual disability, auditory and intellectual disability, etc.
9. *Chronic illness*: an illness that develops slowly, present all the time, or reoccurs.

These groupings assist in focusing-in and providing better services for the different populations of exceptional children according to their inter-individual and intra-individual differences.

2.3.4 *Providing services for exceptional children according to their developmental level*

Early childhood special education is based on the premise that early and comprehensive intervention maximizes the developmental potentials of infants and children with disabilities. Early intervention services for children with impairments or who are at-risk focuses on producing goals that are measurable, specific, and functional. Also these goals should suit the young child's inter-individual and intra-individual differences according to his/her developmental needs (Udell, Peters, & Templeman, 1998:45).

Recent research on inclusion and its effectiveness has stressed that the most comprehensive and widely disseminated guidelines defining quality services in early childhood settings are *developmentally appropriate practices*, as defined by the National Association for the Education of Young Children (NAEYC) in the USA. But research in early childhood special education indicates that service providers using developmental guidelines, as the sole principles for providing services to young exceptional children do not provide the full range of services these children need (Udell, Peters, & Templeman, 1998:45).

Carta, Schwartz, Atwater, and McConnell (1991:295) warned against the sole use of only such developmental guidelines, but emphasized the importance of applying other principles and practices that are effective for children with disabilities. Bredekamp (1993:260) stated that: "The guidelines are the context in which appropriate early education of children with special needs should occur; however a program based on the guidelines alone is not likely to be sufficient for many children with special needs".

Some early childhood programs have started to blend developmentally appropriate practices with some effective early childhood special education practices. This blended approach has resulted in the delivery of quality services within some inclusive preschool and early intervention programs (Bredekamp & Copple, 1997:31).

In the last decade, terms such as mainstreaming, integration, and inclusion denote the introduction of children with impairments into a "typical" environment for some portion of the day; the introduction to some typically developing peers; and for inclusion all children attend the same program all of the time. Such terms help in describing the different set-ups in which children with different impairments may receive special services.

The remainder of this chapter will highlight the different impairments under which exceptional children are grouped. Particular emphasis will be on discussing intellectually and physically impaired children.

2.4 *The different exceptionalities*

Going back to the definition set by Kirk and Gallagher in 1983, and by Hallahan and Kauffman in 1997 of who exceptional children are, it is clear to see that there are broad categories for the different types of impairments, which are:

- 1) Children with learning impairments
- 2) Gifted and talented children
- 3) Children with emotional & behavioral problems
- 4) Children with communication disorders
- 5) Sensory impaired children
- 6) Intellectually Impaired children
- 7) Children with physical & motor impairments

It will be of value at this point to list and discuss the different impairments to help in relating to the definitions, causes, and characteristics of each kind of impairment. Although all the above mentioned impairments will be discussed, focus will be on the two impairments that are pertinent to this study, namely: *intellectual impairment, and physical /motor impairment.*

2.4.1 LEARNING IMPAIRMENT

There have been many debates over the last two decades over the population of children and individuals who for various reasons may have difficulty in their educational and intellectual abilities like reading, writing, spelling, and mathematics. The shift in defining and identifying this population has moved from *dyslexia, dysgraphia, dysorthographia, dyscalculia, emotional disturbance, minimal brain dysfunction, neurological disability*, to be replaced by the single term "*learning impairment*" (Westwood, 1993:11, Rosner, 1993:2). In South Africa, the newest term used is "*learning impairment*". In this study the term learning impairment is used intermittently unless when definitions are stated.

Learning impairment encompasses a wide range of difficulties. The National Joint Committee for Learning Disabilities (NJCLD) in the USA, stresses that learning impaired are a heterogeneous group. Learning impairments are separated into specific problems related to the acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical abilities.

Learning impairment is not a deficiency in any of the sensory systems, such as vision, hearing, touch, etc. It is not problems associated with health or physical mobility. It is not an emotional or behavioral disorder. But it can be seen as the discrepancy between the child's ability to learn and his/her actual learning (Culatta & Tompkins, 1999:102).

Lyon, (1996:56) in his study mentioned that: *"Learning impairment is not a single disorder, but it includes disabilities in any of the seven areas related to reading, language, and mathematics: (1) receptive language, (2) expressive language, (3) basic reading skills, (4) reading comprehension, (5) written expression, (6) mathematics calculation (7) mathematics reasoning. These separate types of learning disabilities frequently co-occur with one another and also with certain social skill deficits and emotional or behavioral disorders"*.

Learning impairment can not be attributed primarily to intellectual impairment, emotional disturbances, cultural difference, or environmental disadvantage. Thus, the concept of learning impairment focuses on the notion of discrepancy between a child's academic achievement and his apparent capacity and opportunity to learn (Lyon, 1996:58). Zigmond (1993:257) notes that *"Learning disabilities reflects unexpected learning problems in a seemingly capable child"*.

2.4.1.1 Definitions of Learning Impairment

There is no one accepted definition of learning impairment. Exclusionary definitions help clarify the nature of learning impairment. The definition given by the National Joint Committee of Learning Disabilities (NJCLD) 1994 is as follows (Hallahan & Kauffman 1997:167):

"Learning disabilities is a general term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning or mathematical abilities. These disorders are intrinsic to the individual, presumed to be due to central nervous system dysfunction, and may occur across a life span."

Problems in self-regulatory behaviors, social perception and social interaction may exist with learning disabilities but do not by themselves constitute a learning impairment.

Although learning disabilities may occur concomitantly with other handicapping conditions (for example sensory impairment, intellectual impairment, and serious emotional disturbance) or with extrinsic influences (such as cultural differences, insufficient or inappropriate instruction) they are not the result of those conditions or influences ".

The most widely accepted definition of learning impairment is the one endorsed by the U.S. Office of Special Education in the Department of Education and is cited by Culatta and Tompkins (1999:103):

"Specific learning disabilities means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not include children who have learning problems, which are primarily the result of visual, hearing, or motor handicaps, of intellectual impairment, of emotional disturbances, or of environmental, cultural, or economic disadvantage".

The most important aspect of any existing definition and description of learning impairment is that it emphasizes the neurological origin of learning problems. Stanvich, (1993:275) proposed that the general term learning impairment be abandoned, and that definitional and research efforts focus on the specific types of disabilities that are now identified in ambiguous terms.

2.4.1.2 Causes of Learning impairment

The cause of most children's learning impairment remains a mystery. Usually some central nervous system dysfunction may underlie the impairment. Other suspected causes may include genetic inheritance and environmental factors such as poor nutrition or exposure to toxic agents. The definition by the National Joint Committee of Learning Disabilities states a presumption of biological causation and lifetime chronicity (Lyon, 1996:58).

Hallahan and Kauffman (1997:170-172) stated that possible causes of a child's learning impairment might fall into three general categories: *organic/biological, environmental and genetic*.

1) *Organic causes*

For many years professionals suspected that neurological factors were a major cause of learning disabilities. In recent years researchers have begun to measure the brain waves and neurological activities of learning disabled persons to assess their brain activity with technologies such as: the electroencephalogram (EEG), the computerized axial tomographic scans (CAT), and the magnetic resonance imaging (MRI). They have come up with results supporting the notion that dysfunction in the central nervous system may be the cause of some cases of learning impairment (Hynd, Marshall, & Gonzalez, 1991; Willis, Hooper, & Stone, 1992).

2) *Environmental causes*

Environmental causes are considered extrinsic, and they can be due to deprivation of nutrition, stimulation, and/or poor positive learning experiences. Hallahan & Kauffman (1997:172) mentioned that environmental deprivation may cause some nutritional deficits which could lead to abnormal development of the brain which could lead to learning impairment. Injuries due to certain accidents, and injury to the central nervous system may also have an effect on the learning processes. Other factors may be poisoning and the in-take of some toxic substances, or exposure to certain x-rays (Kapp, 1991:382-383). Under stimulation of the child's mental and intellectual abilities may also influence and affect their functioning and could result in learning disabilities. Another possible environmental cause may be poor teaching and therefore negative learning experiences. (Rosner, 1993:11).

3) *Genetic causes*

Genetic causes are intrinsic. Abnormalities in the brain may be ascribed to genetic factors that result in learning impairment (Hallahan & Kauffman,

1997:170). Identical twins from the same ovum more frequently tend to have the same difficulty with reading than do fraternal twins. In some reported cases where a child has a reading problem, a parent will also report that he/she had difficulties in the same area when they were young; this could be due to inherited characteristics (Stevenson, 1992:32).

2.4.1.3 Identification of Learning impairment

Learning impaired children have similar characteristics, which usually help in identifying them. However, these children do not share all the common characteristics usually attributed to learning impairments. There are a wide variety of descriptive learning impairment characteristics. Often some of these children appear unmotivated, passive, or inactive about wanting to involve themselves in a learning situation. Some of these children may exhibit a learning problem in one area and not in another. Some may be retained in a grade. The difficulty is usually in distinguishing children with learning problems from low-achieving children (Mercer, 1997).

Kapp 1991:27 made a distinction concerning children's learning problems by defining the terms *restraint* and *disability*. " *Restraints* develop when certain factors or circumstances extrinsic to the child cause him not to actualize his possibilities optimally. *Disabilities* refer to an identifiable deficiency in the child's given potential, such as sensory, neural, intellectual or physical deficiencies... A disability is usually of a permanent nature and can not be done away with ". The Disability Policy and Plans established by University of South Africa (UNISA) defined a disability is seen as: " *the inability to function normally due to lack of a specific capacity* ".

These distinctions help in identifying learning impaired children. Although learning problems appear in teaching situations, they also manifest themselves in informal teaching situations, as in the case of the very young child who learns informally at home (Kapp, 1991:26).

2.4.1.4 Characteristics of Learning impairment

Westwood (1993:12) and Rosner (1993:17) identified some characteristics of learning impaired children:

- 1) Their learning styles have not been established.
- 2) They have difficulty using cognitive strategies in learning.
- 3) They have delayed language development.
- 4) They have difficulty in classifying things together.
- 5) They have difficulty in forming associations.
- 6) Their handwriting is untidy and illegible.
- 7) They are generally sloppy and untidy.
- 8) They have difficulty with laterality and directions.
- 9) They have short attention span and are easily distracted.
- 10) They are hyperactive and show limited concentration abilities.
- 11) Their fine and gross motor skills are poor.
- 12) They confuse words that read both ways (no/on).
- 13) They have problems with memory and retrieval of information when asked.
- 14) They have visual/auditory perception problems such as spatial confusion, and figure-ground identification.

Heward (1996:31) stated that the ten most cited characteristics of learning disabled children are:

- 1) Hyperactivity
- 2) Perceptual-motor impairment
- 3) Emotional liability
- 4) General coordination deficits
- 5) Disorders of attention
- 6) Impulsiveness
- 7) Disorders of memory and thinking
- 8) Specific academic problems
- 9) Disorders of speech and learning
- 10) Some central nervous system signs or irregularities

In the above section, a brief discussion of learning impairment was given. In the next section giftedness and special talents in exceptional children will be briefly discussed.

2.4.2 GIFTEDNESS AND SPECIAL TALENTS

Individuals who have special talents or gifts in their skills and functions can go through life unrecognized, because they are not given the necessary opportunities or training. Giftedness is something to be fostered; yet it is not something a child can show without risk of stigma or rejection. A child who achieves far beyond the level of his or her average peers may be subject to criticism or social isolation by other children or their parents. Many children with special gifts and talents have extraordinary sensitivity to how other people are reacting to them (Clark, 1997:12).

Children with special gifts and talents often test the patience of their parents, teachers, and peers. Gifted children may show disinterest in the topics they learn, but they may be very competitive in areas where they are especially skilled. Some of the problems presented by giftedness parallel those presented by learning impaired individuals. Students who are gifted have special educational needs and need specially designed programs that are competitive with their superior abilities. They seem unmotivated, intensely bored, and discouraged by the educational programs offered to them (Polzella, 1997:32).

Individualizing activities to meet children's highest level of ability will ensure that the educational needs of high-ability young children are met. Efforts have been made to enhance the creativity and productive thinking abilities of gifted children. Lately, the emphasis is on a differentiated curriculum, by changing both the content that is presented and the thinking strategies that the children follow in learning. Gallagher & Gallagher (1994:24) suggested four methods of content differentiation, which are *acceleration*, *enrichment*, *sophistication*, and *novelty*. There is an underlying moral obligation that makes one feel the need

to help those who are disadvantaged versus helping someone who is already advantaged and maybe even superior in their abilities.

2.4.2.1 Definitions of Giftedness and Special Talents

There is no inherent right or wrong way in any one definition of giftedness. The definition of giftedness is usually shaped by what a culture believes is most useful or necessary for its survival. Nutall, Romero, & Kalesnick (1992:302) proposed the following definition for gifted and talented children:

“Gifted children are those showing sustained evidence of advanced capability relative to their peers in general academic skills and/or in more specific domains (music, arts, science, etc.) to the extent that they need differentiated educational programming”.

Another definition by Renzulli & Reis (1991:113) emphasized the educational aspect of giftedness by stating that:

“Gifted children should be defined as those who have demonstrated or shown potential for the following in a given domain or field:

1. *High ability, including high intelligence*
2. *High creativity, the ability to formulate new ideas and apply them to the solution of the problem*
3. *High task commitment, a high level of motivation and the ability to see a project through to its conclusion”.*

Gallagher & Gallagher (1994:12) defined gifted and talented students as:

“Those children and youths who 1) give evidence of high performance capability in such areas as intellectual, creative, artistic, or leadership capacity or in specific academic fields and 2) require services or activities not ordinarily provided by the school in order to develop such capabilities fully”.

Kauffman (1997:459) has attempted a global definition of what it means to be gifted and talented by stressing:

“High abilities (including high intelligence as an ability), high creativity (as seen in the generation of novel ideas and applying them as solutions to problems), and high task commitment (shown in the ability to see projects through to their conclusion)”.

2.4.2.2 Factors Contributing to Giftedness and Special Talents

Giftedness is a specific, valued and unusual talent that a person may exhibit which makes him/her different from an average individual. The main factors

that contribute to giftedness are *genetic/biological* and *social/environmental* factors (Hallahan & Kauffman, 1997:461).

1) *Genetic/Biological factors*

Although genetic and other biological factors (such as neurological functioning and nutrition) may contribute to giftedness, it is to a large extent determined by one's genetic inheritance. Whatever genetic combinations are involved, giftedness is exceedingly complex and is not distributed by race or social class. The statistical probability of a child being gifted increases when the parents of the child have higher than average intelligence and are able to provide a nurturing environment (Kauffman, 1997:461). Genetic differences in abilities apply within various ethnic groups and social classes, but not between them (Thompson & Plomin, 1993:461).

Genetic influences on the development of superior abilities cannot be denied, but these biological influences are clearly no more important than the environment in which children are nurtured. Biological factors may also contribute to the determination of intelligence. Nutritional and neurological factors may also determine how intellectually competent a child becomes. Malnutrition or neurological damage can prevent giftedness from developing (Brown & Pollitt, 1996:40).

2) *Social/Environmental factors*

Although talents may be shaped by heredity, it is nurtured and developed by the environment. Parents, peer groups, families, and even community experience can have a strong influence on the development of a child's talents (Kirk, Gallagher, & Anastaslow., 1993). Stimulation, opportunities, expectations, demands, rewards and reinforcement for performance all affect children's learning (Tannenbaum, 1991:29). Children who realize most fully their potential for accomplishment have families that are stimulating, directive, supportive, and rewarding of their abilities (Hine, 1994:31).

2.4.2.3 Identification of Giftedness and Special Talents

Gifted and talented children show high skill levels in their abilities and performance. In order to measure their abilities, intelligence quotient (IQ) tests, standardized achievement test score, and evaluations of the child's work or performance are done. Culatta & Tompkins (1999:386) stated that:

"The most common strategies for identifying gifted and talented children usually includes some combination of the following tactics:

- 1) *Standardized tests are administered to identify potential candidates.*
- 2) *Nominations are solicited from creditable sources.*
- 3) *A product illustrating outstanding potential is studied".*

Every generation has numerous gifted children who may complete their school years without ever being identified as gifted, or being able to fully actualize their potential. It is generally accepted that either teachers or parents spot the intelligent or gifted child. But many children unfortunately go unidentified for many reasons, some of which may be: 1) Low socio-economic or poor cultural background, where little emphasis is placed on scholastic skills. 2) Illness or disability that inhibits the realization of their intellectual abilities. 3) No consensus on the meaning of the term "*giftedness*". 4) Lack of efficient scales or methods for proper identification of giftedness (Booyse, 1991:146).

2.4.2.4 Characteristics of Giftedness and Special Talents

Gifted and talented children share some common traits and characteristics, which helps in identifying them and providing the adequate learning environment that best suits their needs. Some of the traits seen in some gifted children have been summarized by Gallagher & Gallagher (1994:45-48), some of which are:

- 1) Superiority in intelligence levels.
- 2) Superiority in physical performance.
- 3) They excel in sports.
- 4) They excel in some academic areas such as reading or math.
- 5) They are bored and antagonistic of the regular and traditional school curricula.
- 6) They are disinterested in school, perform poorly and drop out
- 7) They constantly complain of the school curriculum
- 8) They are restless and anxious looking for stimulation and other interesting activities

Culatta and Tompkins (1999:380-382) also stated that gifted and talented children share some general characteristics, some of which were reviewed in were summarized in the following traits:

- 1) They show individual variations
- 2) They are creative
- 3) They show exceptional and outstanding academic skills (grasp concepts, analyze, generalize, and synthesize new ideas)
- 4) They have advanced reading skills
- 5) They learn, retain, and use information quickly
- 6) They have an excellent command of language
- 7) They enjoy acquiring and manipulating abstract material
- 8) They show self confidence
- 9) They show potential for leadership
- 10) They show superior decision-making skills

In the above section a brief discussion of giftedness and special talents in exceptional children was given. In the next section emotional and behavioral disorder in exceptional children will be briefly discussed.

2.4.3 EMOTIONAL AND BEHAVIORAL DISORDERS

There are many different terms used to refer to an exceptional child who may have problems and/or difficulties in interpersonal and socio intrapersonal

relations. Terms such as socially maladjusted child, emotionally disturbed child, socio-emotionally deviant child, behaviorally disturbed child, and also autistic child are used in turn to refer to the same child (Kapp, 1991:112).

These children are usually defined as emotionally and behaviorally disturbed. Emotions and behaviors are inextricably intertwined, therefore it is difficult to imagine that a child may have a behavioral problem without having and emotional problem. Children who have emotional and behavioral disorders have problems making friends. Their most obvious problem is failure to establish close and satisfying emotional ties with people. Some of these children become withdrawn and isolated from others because they become aggressive and hostile towards people. They seem always to be engulfed in a continuous battle with everyone. Their problems are not just in their behavior or the environment around them, but their problems arise because the social interactions and transactions between the child and the social environment are inappropriate (Hallahan & Kauffman, 1994:204).

Children with emotional and behavioral disorders may have additional impairments that complicate their already difficult circumstances. These children come from all socioeconomic levels, and ethnic and racial groups. These children are notably anxious and depressed; some act out while others are withdrawn. Anxiety refers to feelings of apprehension, fearfulness, or dread, while depression refers to feelings of sadness, self-depreciation, or worthlessness. Children who act out are usually hostile, angry, and sometimes aggressive or assaultive (Nelson, 1993:7).

2.4.3.1 Definitions of Emotional and Behavioral disorders

Defining emotional and behavioral disorders has always been a very sensitive issue. Kauffman (1993:42) claims that defining this disorder is somewhat like defining a familiar experience like anger, happiness, or loneliness. Some of the factors that make it difficult to have an objective definition are:

- 1) Lack of precise definitions of mental health and normal behavior.
- 2) Differences among conceptual models.

3) Difficulties in measuring emotions and behavior.

There are many definitions for emotional and behavioral disorders, but there is a general agreement that this disorder refers to:

- 1) Behavior that goes to an extreme, behavior that is not just slightly different from the usual
- 2) A problem that is chronic, one that does not quickly disappear
- 3) Behavior that is unacceptable because of social or cultural expectations (Hallahan & Kauffman, 1994:208).

The one definition that has been mostly abided to is the one included in the federal rules and regulations governing the implementation of The Individuals with Disabilities Act (IDEA), cited by Hallahan & Kauffman, 1994:210 which states the following:

- " (i) *the term emotionally disturbed means a condition exhibiting one or more of the following characteristics over a long period of time and to a marked extent, which adversely affects educational performance:*
- (A) *an inability to learn that cannot be explained by intellectual, sensory, or health factors ;*
 - (B) *an inability to maintain satisfactory relationships with peers and teachers*
 - (C) *inappropriate types of behavior or feelings under normal circumstances*
 - (D) *a general pervasive mood of unhappiness or depression ;*
 - (E) *a tendency to develop physical symptoms or fears associated with personal or school problems .*
- (ii) *the term includes children who are schizophrenic or autistic; the term does not include children who are socially maladjusted unless it is determined that they are seriously emotionally disturbed "*

In recent years this federal definition has been criticized for many reasons, one of which is that it excludes children who are socially maladjusted but are not emotionally disturbed. An alternate definition developed by the National Mental Health and Special Education Coalition in the USA, and cited by Culatta & Tompkins (1999:140) states that:

"Emotional or Behavior Disorders refer to a condition in which:

- (i) *Behavioral or emotional responses of an individual in school are different from his/her generally accepted age-appropriate, ethnic, or cultural norms that they adversely affect educational performance in*

such areas as self-care, social relationships, personal adjustment, academic progress, classroom behavior, or work adjustment. Such a disability is:

- (a) more than a temporary, expected response to stressful events in the environment;*
 - (b) consistently exhibited in two different settings, at least one which is school-related; and*
 - (c) unresponsive to direct intervention in general education or the child's condition is such that general education interventions would be insufficient*
- (ii) Emotional and behavioral disorders can co-exist with other disabilities.*
- (iii) This category may include children or youth with schizophrenic disorders, or other sustained disturbances of conduct or adjustment when they adversely affect educational performance in accordance with section (i).*

2.4.3.2 Causes of Emotional and Behavioral disorders

The cause of emotional and behavioral disorders have been attributed to four main factors: pathological family relationships, undesirable experiences in school, biological disorders and diseases, negative cultural experiences (Hallahan & Kauffman, 1994:213).

There is no conclusive evidence that any of these factors is directly responsible for this disorder, some factors may give rise to predisposition and exhibit a problem behavior, while others may trigger or precipitate it. That is, some factors such as pathological family relationships (where a child observes one parent beating the other) may have an immediate effect and may trigger maladaptive responses in a person who is already pre-disposed to problem behavior. Other factors, such as genetics, influence behavior over a long period of time and increase the likelihood that a given set of circumstances will trigger maladaptive responses (Hallahan & Kauffman, 1994:214-216).

Many cultural and environmental conditions affect adult's expectations of children and children's expectations of themselves. Values and behavioral standards are communicated to children through a variety of cultural

conditions, demands and prohibitions. These will most definitely affect a socially maladjusted individual in one way or the other depending on the level of their already existing problem. There are also contributing factors that may either directly or indirectly contribute to the development of a problem. Some of these factors are:

1) *Biological factors*

Behaviors and emotions may be influenced by genetic, neurological, or biochemical factors, or by combinations of these. All children are born with temperament that may be changed by the way they are reared. But usually children with difficult temperaments are predisposed to develop emotional or behavioral disorders (Baumeister, Kupstas, & Klindworth, 1990.p:4).

2) *Family factors*

Empirical research on family relationships indicates that the influence of parents on their children is very critical; and that the children with emotional or behavioral disorders may influence their parents as much as the parents may influence their children. Family influences are interactional and transactional and that the effects of parents and children on one another are reciprocal (Patterson, Reid, & Dishion, 1992:34). Emotional and behavior disturbances may be traced to the child's educational situation at home. Educational deficiencies and unbalanced family relationships can transform the child's attitudes to problematic behaviors. Disturbed relationships between family members, and in particular between the child and his/her parents can lead to problematic behaviors and emotional disturbances, that can lead to deviant behaviors (Kapp, 1991:115).

Some of the factors mentioned by Kapp (1991:115) that may contribute to problematic behaviors and emotional disturbances are: " rejection of the child, inconsistent conduct, too strict and unreasonable discipline, lovelessness, overprotection, overprotection, overindulgence, etc...". " other factors that can contribute to the changes in the child's educational situation are alcohol abuse, alcoholism in the home, an incomplete family, unemployment, etc...".

3) *School factors*

School may have a damaging effect on a child who already shows signs of maladjustment, where negative experiences in the classroom may trigger emotional problems. Some children may already have emotional or behavioral problems when they begin school; while others develop these problems during their school years, perhaps due to damaging experiences in the classroom which may become better or worse according to how they are managed. A child's temperament and social competence may interact with classmates' and teachers' behavior in contributing to emotional or behavioral problems (Martin, 1992:101).

The school can contribute to the development of emotional problems in several ways. Some of these factors may be : 1) The teachers' insensitivity to children's individuality. 2) Requiring children to conform to the rules and routines. 3) Holding too high or too low expectations for the child's achievement or 4) Teachers and peers may be models of misconduct (Kauffman, 1993:45).

4) *Cultural factors*

The culture in which children are reared exerts an influence on their emotional, social, and behavioral development. There are several cultural factors that may contribute to emotional or behavioral problems in children. Some of these factors are: the level of violence in the media; changing standards in child rearing principles; changing standards in religious demands; changing standards in restrictions on behavior. Culture affects the way children behave. Therefore, considerations must be given to other interactive effects such as those afflicted by schools and families (Kauffman, 1993:47).

2.4.3.3 Identification of Emotional and Behavioral disorders

Most students with emotional and behavioral disorders are easily noticed and identified by their teachers. Some students will not bother anyone, but experienced teachers can tell when they need help. Children with pervasive

developmental disorders are easily recognized. But some children with emotional or behavioral disorders are undetected because their teachers are not sensitive to their problems. The younger the child, the more difficult it is to judge whether that child's behavior signifies a serious problem.

The following identification procedures are routinely used to help in identifying children with emotional or behavioral disorders: checklists, interviews, ecological assessments, and self-reports or self-concept measures (Culatta & Tompkins, 1999:152).

The most effective approach in conducting identification and diagnostic procedures is a systematic, comprehensive, and multidisciplinary approach; where the child is evaluated across the cognitive, academic, social, affective, medical, and functional domains. Information regarding adaptive behavior, neurological functioning, perceptual abilities, and motor skills may also be needed and helpful in the evaluation process (Kauffman, 1993:48).

2.4.3.4 Characteristics of Emotional and Behavioral disorders

Children with emotional or behavioral problems exhibit some typical traits or characteristics, which also help in identifying them. When children with emotional or behavioral disorders are compared with their normal peers, they usually tend to score lower on measures of intelligence, and academic achievement. They also display inadequate social skills. Depending on the severity of the disorder, most emotionally or behaviorally disabled children are characterized as anxious and subject to depression (Hallahan & Kauffman 1994:220-221).

Kirk, Gallagher, and Anastaslow (1993:182) stated some of the common characteristics of emotional or behavioral children, and summarized them in the following points: academic and school failure; social isolation; difficulty in developing meaningful interpersonal relationships; some antisocial behaviors; apprehension, sadness, withdrawal; shyness, disinterest, immaturity; impulsivity, hyper-activity, over-activity. Some of the obvious traits exhibited

by children who have emotional or behavioral problems was also stated by Hallahan and Kauffman (1994:220-224), some of which are summarized as follows:

- 1) Conduct problems (not knowing how to handle group activities; dealing with peer teasing)
- 2) Instability in personality (unresponsive, rigid, emotionally detached)
- 3) Show signs of being a slow-learner or mild intellectual impairment.
- 4) Exhibit some form of externalizing behaviors such as acting-out, aggression, or hyperactivity.
- 5) Exhibit some form of internalizing behaviors such as anxiety, withdrawal, or depression.
- 6) Immature behaviors for their age.

In the above section emotional and behavioral disorders in exceptional children were briefly discussed. In the next section communication disorders in exceptional children will be briefly discussed.

2.4.4 COMMUNICATION DISORDERS

Communication is among the most complex of human functions. People communicate with each other to express and convey feelings, thoughts, ideas, and opinions; which in turn is a social interaction with the environment and people. The context in which communication occurs must be considered in addition to people's reasons for communicating the rules that govern the process of dialogue and discourse.

Communication is more than just talking, it is understanding other's speech and gestures, and learning how to speak like others in their immediate environment. A child learns to understand his or her world by translating experiences into language. As the child matures, feelings, thoughts, and discoveries are shared with others by words that are joined together in an endless array of complex phrases. This exchange of ideas, facts, and opinions between people is what is known as communication (Bernstein, 1993:18).

Communicative competence is the ability a child develops to use speech and language to deal with their surrounding environment, by obtaining, storing, analyzing, and sharing information with others. Breakdowns or dysfunction of this communication system makes learning a difficult task. Since speech and language are learned processes, early structured intervention can help some children with communication problems compensate for their disability and enable them to overcome their problem (Calutta & Tompkins, 1999:176). Communication disorders may take many forms and descriptions; but most of these disorders revolve around the issue of *speech and language*.

2.4.4.1 Definitions of Communication Disorders

Speech and language are the tools used for communication. Therefore, it is only appropriate to start by defining these two terms. *Speech* is the medium to transmit and receive messages. It is the process of forming and sequencing the sounds of oral language. *Speech* is the systematic use of sounds and sound combinations to produce meaningful words, phrases, and sentences. Culatta & Tompkins, (1999:177) stated that: "...the mechanism of speech involves a certain sequence of voicing, phonation, resonance, and articulation..."

Language is the communication of ideas through an arbitrary system of symbols used according to certain rules that determine Language is much more complex than speech, because it puts meaning into speech and is used to express and receive meaning. Language enables communication to work by allowing the composing and sending of messages (encoding) from one person to another, who receives them and understands them (decoding) meaning (Hallahan & Kauffman, 1997:258-260).

Speech and language are vulnerable to many disruptions that can lead to disorders. Since the entire communication system depends on the neurological system for cognitive processing of environmental experiences, many factors can lead to speech disorders; some of which are: disruptions in

the neurological system, underdevelopment of cognitive skills, lack of appropriate language experiences, etc. (Culatta & Tompkins 1999:182).

Communication disorders include both speech disorders (producing language) and language disorders (understanding and formulating language). The following definition given by the American Speech-Language-Hearing Association (ASHA) summarizes the crucial points needed to understand what is meant by communication disorders:

“ COMMUNICATIVE DISORDERS:

- A. A *SPEECH DISORDER* is an impairment of voice, articulation of speech sounds, and/or fluency. These impairments are observed in the transmission and use of the oral symbol system.
1. A VOICE DISORDER is defined as the absence or abnormal production of voice quality, pitch, loudness, resonance, and/or duration.
 2. An ARTICULATION DISORDER is defined as the abnormal production of speech sounds.
 3. A FLUENCY DISORDER is defined as the abnormal flow of verbal expression characterized by impaired rate and rhythm that may be accompanied by struggle behavior.
- B. A *LANGUAGE DISORDER* is the impairment or deviant development of comprehension and/use of a spoken, written, and/or other symbol system. The disorder may involve (1) the form of language (phonologic, morphologic, and syntactic systems), (2) the content of language (semantic system), and/or (3) the function of language in communication (pragmatic system) in any combination...” (p949-950)

Hallahan and Kauffman (1997:260) summarized the definition of communication disorders in the following statement::

"A *Communication Disorder* is an impairment in the ability to send receive, process, and comprehend concepts of verbal, nonverbal, and graphic symbol systems. A communication disorder may be evident in the processes of hearing, language, and/or speech... may range in severity from mild to profound... may be developmental or acquired. Individuals may demonstrate one or any combination of communication disorders".

2.4.4.2 Causes of Communication Disorders

Establishing the causes of communication disorders is difficult because they are varied, and often occur as part of other disabilities. There are multiple

and interrelated causes for communication disorders, which could be due to *central, peripheral, environmental and emotional* factors, and also *mixed* factors.

- 1) **Central factors:** are causes associated with damage or dysfunction to the nervous system.
- 2) **Peripheral factors:** refer to sensory or physical impairments that are not caused by brain injury and/or dysfunction.
- 3) **Environmental and emotional factors:** refer to language disorders that originate in the child's physical or psychological environment.
- 4) **Mixed factors:** refers to a combination of any of the mentioned factors (Hallahan & Kauffman, 1997:262).

Some of the causes of speech and language problems may be *organic causes* (due to unknown anatomical or physiological problems), or *functional causes* (due to unknown causes or faulty learning) (McReynolds, 1990:26).

2.4.4.3 Identification of Communication disorders

A child with a communication disorder may progress through the normal stages of language development but at a significantly later age when compared to a normal child. Van Riper & Erickson (1996:32) mentioned that the most common speech disorders may cause disruption to speech sound production (*articulation*), vocal sound production (*voice*), and the smooth flow of speech (*fluency*).

A communication disorder may be seen as a failure to learn to communicate within the norm. There are many reasons for this failure. It may be the result of not having prerequisite conceptual knowledge, or adequately developed cognitive processes, it may be developmental or acquired, expressive and/or receptive, an isolated problem, or a component of other disorder (Van Riper & Erickson, 1996:32). But many speech and language problems are directly related to the etiology of the problem. Physical, emotional, or faulty learning may also cause difficulty or problems in speech and/or language.

Children with speech and language problems are initially identified by their schoolteachers or parents. A referral to the speech-language pathologist usually helps at this initial identification stage. Screening examinations can also help in this identifying process to further decide on the cause of the problem. Then a diagnostic procedure is established to help in the treatment plan of the problem.

2.4.4.4 Characteristics of communication disorders

Van Riper and Erickson (1996:38-40) discussed some of the most obvious characteristics and traits that identify children with speech and language disorders, some of which are:

- 1) They achieve a communication skill or milestone at a later-than-average age.
- 2) They show signs that they do not understand the language, and can not use it spontaneously.
- 3) They use prelinguistic communication (make noises like child talk to communicate).
- 4) They use gestures or vocal noises to express their needs.

In the above section communication disorders in exceptional children were briefly discussed. In the next section sensory impairments in exceptional children will be discussed.

2.4.5 SENSORY IMPAIRMENTS

Children who suffer from conditions that effect the normal processes of their senses, are considered to have some form of impairment. The more relevant senses are the sense of hearing and vision. The degree of the impairment differs and depends on the severity of the condition. The following section will highlight the two main types of sensory impairments: *Hearing impairment* and *visual impairment*.

2.4.5.1 Hearing Impairment

Hearing impairment is a great barrier to the development of language and speech for individuals. Children who are deaf or hearing impaired will experience their immediate environment in a markedly different way than do their hearing peers. They are cut off from the process of learning and may become isolated, unless they are identified early and helped to compensate for their hearing loss by learning to use amplification, or learn to use various types of assistive devices, or learn non-oral ways of receiving and expressing language.

When children are born with impaired auditory sensations, they are put into a classification of children *with congenital hearing impairments*. But when children acquire problems with their hearing after birth, they are put into the classification of children with *adventitious hearing impairments*. If the loss of hearing occurs before the child has learned speech and language, it is called a *prelinguistic hearing impairment*. If the loss occurs after the child has learned language, the hearing problem is called a *post-linguistic hearing impairment* (Culatta & Tompkins, 1999:273-275).

2.4.5.1.1 Definitions of Hearing Impairment

There are many definitions and classifications of hearing impairments, because there are people who are deaf and others who are hard of hearing. From a physiological point of view the measurable degree of hearing loss is that which classifies the case. Children, who cannot hear sounds at or above a certain intensity (loudness) level are classified as "deaf", others with a hearing loss are considered "*hard of hearing*". The Individuals with Disabilities Education Act (IDEA) defines deafness as:

"A hearing impairment that is so severe that a child is impaired in processing linguistic information through hearing with or without amplification".

Turnbull, Turnbull, Shank, & Leal (1995:133) define hearing impairment as “an impairment in hearing, whether permanent or fluctuating, that adversely affects a child’s educational performance, but which is not included under the definition of deafness”. One of the most commonly accepted definitions for hearing impairment is cited by Hallahan and Kauffman (1997:312):

- *Hearing impairment* is a generic term indicating a hearing disability that may range in severity from mild to profound; and includes deaf and hard of hearing.
- A *deaf* person is one whose hearing disability precludes successful processing of linguistic information through audition, with or without a hearing aid.
- A *hard of hearing* person is one who, generally with the use of a hearing aid, has residual hearing sufficient to enable successful processing of linguistic information through audition.

2.4.5.1.2 Causes of Hearing Impairment

The close relationship between hearing loss and language delay is the key to identifying the hearing impairment and the on set of the problem. The earlier the hearing loss occurs in a child’s life, the more difficulty he or she will have developing the language of his mother’s tongue. Causes of the hearing loss are classified on the basis of the location of the problem within the hearing mechanism. Accordingly, the three major causes of hearing impairment may be influenced by the following classification of the location of the dysfunction: *conductive, sensori-neural, and mixed hearing impairment* (Hallahan & Kauffman, 1997: 317). These dysfunctions are:

- 1) *Conductive hearing impairment*: refers to a mild hearing loss that interferes with the transfer of sound along the conductive pathway of the middle or outer ear.
- 2) *Sensori-neural hearing impairment*: a hearing loss that is usually severe, resulting from malfunctioning of the inner ear.
- 3) *Mixed hearing impairment*: is a combination of the two impairments

Other causes of hearing loss may be acquired, which means that the child was not born with the problem, but that the problem came about as the child was growing. Acquired conductive hearing loss may develop from blockage caused by blockage; otitis externa; diseases of the middle ear; otitis media; retraction of the tympanum; otosclerosis (Kapp, 1991.p.328-330).

Congenital sensorineural hearing loss is usually divided into three categories: hereditary, antenatal injury, and injuries caused at or after birth (Kapp, 1991.p.330-331).

2.4.5.1.3 Identification of Hearing Impairment

For some children the identification process for any hearing problems may begin as early as at birth. Most children with severe hearing loss are identified by their parents or others in their immediate environment prior to school screening. Preschool and school screenings help discover children with mild and moderate hearing losses, who have not been previously diagnosed.

Children detected by these screening examinations are usually referred for more intensive audio-metric and other testing. Significant hearing losses are often discovered by parents who notice that their child is not attending to environmental sounds or speech; or does not startle when loud sounds occur; or does not respond to people he/she is not looking at.

Green and Fischgrung (1993:278) stated that there are many signs that can be clues to parents and others in a child's environment that the child's hearing may have a problem. Some of these signs are: 1) does not appear to attend. 2) has frequent earaches or discharge from the ears. 3) makes poor speech sounds. 4) often misinterprets verbal requests. 5) does not respond to direct attempts at communication, appears to attend better when facing a speaker, 6) frequently requests repetitions, 7) sets the volume on electronic equipment to levels that are unreasonably loud.

2.4.5.1.4 Characteristics of Hearing Impairment

The most heavily affected areas of development in a hearing impaired child is his comprehension and production of a language. Hallahan and Kauffman (1994:319-324) cited many characteristics of this population of children. The researcher summarized them in the following section:

- 1) Exhibit signs of frustrations and withdrawal.
- 2) Lower tolerance to adaptations to new setups.
- 3) They have problems in reading.
- 4) Poor comprehension, poor production of speech and language.
- 5) Most hearing-impaired children have deficits in academic achievement.
- 6) Socially they may feel lonely because they can not find someone to converse with in their way.
- 7) They have problems communicating their needs if they do not learn a medium to express themselves.
- 8) Children who are pre-lingually deaf learn to speak at a later stage than those who have acquired deafness.

2.4.5.2 Visual Impairment

Visual impairment is one of the least prevalent impairments in children; blindness is considered an adult impairment. Blindness is a visible impairment and therefore this has a tremendous effect on the blind person. Visually impaired and blind children are usually very sensitive to their disability, and prefer to be treated like everyone else. They do not seek pity or unnecessary help; rather they are very protective of their independence.

Depending on the amount of residual vision the child possesses, modifications in learning, socialization, and recreation must be implemented in a practical way to help compensate for the information lost by the visual impairment (Smith & Luckasson, 1995:178).

Legally, a child is considered to have *low vision* if acuity in the best eye after correction is between 20/70 and 20/180 and the visual field extends from 20 to 180 degrees. A child is considered *blind* if acuity in the best eye after

correction is 20/200 or less, and if the field of vision is restricted to an area of less than 20 degrees. But these terms do not accurately reflect a child's ability to see or read print (Bina, 1999:79).

2.4.5.2.1 Definitions of Visual Impairment

Students with visual impairment may be described in a number of ways for different purposes. Categorizations help define children with visual impairment for legal and for educational purposes. Educational definitions are most concerned with the modifications that will be needed to ensure that a child will receive the most appropriate and effective educational experience. According to the Individuals with Disabilities Education Act (IDEA) (42 Federal Regulation, 1977). A visual handicap: "...is a visual impairment that, even with correction, adversely affects a child's educational performance..."

Two widely used terms that help in defining visual impairment are *low vision* and *blind*. The American Foundation for the Blind defines those with low vision as possessing visual acuity between 20/200 and 20/70 in their better eye with the best possible correction, or those who need temporary or permanent special educational services (Culatta & Tompkins, 1999:310). Children who are blind are those whose visual loss indicates that they should be educated mainly with Braille or other tactile or auditory materials. Children who are totally blind do not receive meaningful information through the visual sense. They need to use auditory and tactile learning methods. Those who are functionally blind, typically use Braille for efficient reading and writing (Lewis, 1995).

Hallahan and Kauffman (1997:354-356) stated two main categories that help in defining visual impairment, which are:

- *Legally blind*: refers to a person who has visual acuity of 20/200 or less in the better eye even with correction, or has a vision so narrow that its widest diameter subtends an angular distance no greater than 20 degrees.
- *Educational definition*: individuals who are blind are so severely impaired they must learn to read Braille or use aural methods.

Although the definitions and categorizations differ for legal and educational reasons, the single most defining characteristic is a visual restriction of sufficient severity that interferes with a child's normal progress in a regular education setting without some modifications.

2.4.5.2.2 Causes of Visual Impairments

The most common visual problems are the results of errors in refraction such as *myopia* (near sightedness), *hyperopia* (far sightedness), and *astigmatism* (blurred vision) that affect central visual acuity. Each of these visual problems can be serious if ignored and may cause significant impairment (Hallahan & Kauffman, 1994:346-347).

Among the most serious visual impairments are those caused by glaucoma, cataracts, and diabetes. *Glaucoma* is a condition in which there is excessive pressure in the eyeball. If left untreated the condition progresses to the point at which the blood supply to the optic nerve is cut off and blindness occurs. *Cataracts* are caused by clouding of the lens of the eye, which results in blurred vision. *Diabetes* can cause diabetic retinopathy which is a condition that results from interference with the blood supply to the retina of the eye (Hallahan & Kauffman, 1994:236).

In general, causes of visual impairments may be grouped under the following main areas: heredity, injuries, infectious diseases, tumors, and malnutrition. Other causes of visual impairments can be due to pre-natal causes linked to *hereditary factors*, *infectious diseases* (rubella and syphilis). While yet others can be due to *improper muscle functioning* (strabismus and nystagmus) (Hallahan & Kauffman, 1997.p.358-359). In a study by Kirk, Gallagher and Anastasiow (1993:149) it was mentioned that causes and types of visual impairments could be grouped into two major categories. *Causal category* (injuries, infections, substance abuse, mal nutrition); *primarily refractive disorders* (retinal and optic nerve problems, eye muscle disorders, central vision insufficiencies).

2.4.5.2.3 Identification of Visual Impairments

The most widely used strategies for identifying children with visual impairments are *acuity screenings* and *functional visual assessments*. The Kentucky Society for the Prevention of Blindness (1990:17) lists nine signs that may be significant in identifying children with visual impairments:

- 1) Clumsiness and trouble walking in unfamiliar settings.
- 2) Holding the head in an awkward position or holding material close to the eyes to see it.
- 3) Lack of attention to written information on blackboards or other visual presentations.
- 4) A constant need for explanation of what is happening at events.
- 5) Extreme sensitivity to glare, or loss of vision in different types of light.
- 6) Extreme squinting.
- 7) Excessive eye rubbing.
- 8) Poking the eyes with fingers or knuckles.
- 9) Swollen eyes or strabismus.

There are many signs and symptoms that may help in identifying possible eye problems before they can lead to impairments (Hallahan & Kauffman, 1997:358-359):

1) Appearance

- Crossed eyes
- Red-rimmed, swollen eyelids
- Inflamed or watery eyes
- Recurring styes

2) Complaints

- Cannot see well
- Blurred or double vision
- Dizziness, headaches following close eye work
- Eyes itch, burn, or feel scratchy

3) Behavior

- Shuts or covers one eye, tilts head
- Thrusts head forward
- Has difficulty reading or doing work requiring close use of eyes
- Holds book close to eyes
- Squints eyelids together or frowns
- Rubs eyes excessively

2.4.5.2.4 Characteristics of Visual Impairment

Children with visual impairments, depending on the severity of the impairment, may not be motivated to be involved in their immediate environment. The lack of visually driven imitative behaviors and the restriction of an environment that is overly protective may retard the development of different skills (Caton, 1993).

Some common characteristics of visually impaired are: 1) they indulge in verbalism. 2) lack of social skills. 3) have difficulty in showing appropriate smiling, facial expressions, and postural messages. 4) ask too many questions. 5) engage in inappropriate acts of affection. 6) show some stereotypical behavior such as body rocking, eye rubbing, inappropriate hand and finger movements (Culatta & Tompkins, 1999:315).

Some other traits that can help in identifying visually impaired children, as mentioned by Hallahan & Kauffman (1994:348- 358) are as follows:.

- 1) They show restrictions in their descriptions of things in their environment.
- 2) They rely too much on tactile and auditory sensations and stimulation.
- 3) Their ability for spatial perception is very sharp which helps them to maneuver easily in their environment.
- 4) Have the ability to detect subtle changes in the pitches of high frequency echoes as they move toward the object (*obstacle sense*).

- 5) Make better use of sensations they obtain; through concentration and attention they learn to make very fine discriminations.
- 6) Exhibit *stereotypic behaviors* (repetitive, movements such as rocking, poking, rubbing the eyes, hand or finger movements).

In the above section sensory impairments in exceptional children were briefly discussed. In the next section children with intellectual impairment will be discussed in more detail.

2.4.6 INTELLECTUAL IMPAIRMENT

Intellectual impairment is a complex phenomenon, which is studied by different disciplines dealing with children. Intellectual impairment is conceptualized, defined, and diagnosed in a variety of ways by the different disciplines. Children with intellectual impairment come from all levels of society, racial groups, and especially from families that are socio-economically disadvantaged.

Depending upon the degree of severity, children with intellectual impairment are unable to make adequate adjustments to many life circumstances because of their limited intellectual and adaptive capacities (Weham, 1997). Intellectual impairment is a product of the interaction between heredity and environment, with prolonged exposure to impoverished environment exacerbating the problem (Macmillan, Siperstein, & Gresham, 1996:356).

Intellectual impairment is also conceptualized as a sociological phenomenon within society that can be observed through the limited performance of some of the children in that society. Intellectually impaired children are markedly slower than their age mates in their intellectual abilities such as: using memory effectively, associating and classifying information, reasoning, and making adequate judgments. They are at the low end of the typical class but are able to perform there if given an appropriate educational program.

The intellectually impaired child's behavior may also be influenced by the environment around him; where he may be considered '*impaired or disabled*' by the norm if he could not respond to the demands of society. But if the immediate environment around the intellectually impaired child is adapted to fit his abilities and needs, this will allow for maximum involvement within the child's capabilities (Weham, 1997:49).

2.4.6.1 Definitions of Intellectual Impairment

There have been numerous attempts at defining intellectual impairment. Any definition should not be static, but may be modified and refined as more experience and evidence become available. The most recent attempts to define intellectual impairment have shifted from a condition that exists solely within the individual to a condition that represents an interaction between the child and his immediate environment.

The conceptualization of intellectual impairment depends upon the specialist dealing with the child. Physicians may consider intellectual impairment as a symptom indicating a chemical imbalance or the inability of the body to assimilate and digest certain foods. Sociologists consider intellectual impairment as a symptom of inadequate social concern and an inadequacy of social structure. Mental health specialists consider intellectual impairment a symptom of severe mental illness. Educators consider intellectual impairment as a symptom of poor or inadequate instruction. In reality, intellectual impairment is often associated with one or more of these conceptualizations (Heward, 1996:71-73). The most commonly used definition of intellectual impairment is the one devised by the American Association on Mental Retardation (AAMR) 1992 as cited in Culatta and Tompkins (1999:70). This definition emphasizes three critical components, which are intelligence, adaptive behavior, and age of onset.

"Intellectual impairment refers to substantial limitations in present functioning characterized by significantly sub-average intellectual functioning, existing concurrently with related limitations in two or more of the following applicable adaptable skills areas such as: communication, self-care, home living, social skills".

Kidd (1983:243-244) stated a definition in which emphasis was on intellectual impairments combined with adaptive behavior:

"Intellectual impairment refers to significantly sub-average intellectual functioning resulting in and associated with concurrent impairments in adaptive behavior and manifested during the developmental period".

In this definition by Kidd (1983:291-292) three criteria are involved:

- 1) A level of intelligence functioning which is significantly below average.
- 2) An inability to comply with the ordinary social norms that applies to a person of that age.
- 3) A manifestation before the age of 18 years.

In definitions of intellectual impairment the focus is often placed on those criteria which are important to the particular perspective. (Kapp, 1991:289-290) discussed some of the more widely used criteria that appear in definitions for intellectual impairment, which are: *intelligence, social criterion, developmental criterion, and medical criterion*.

- 1) Intelligence criterion is mentioned in most definitions as a criterion for intellectual impairment, with the aim of identifying the mental and intellectual level of the children, to aid in their placement in special education classes. But it is seen as a rigid criterion on its own for it implies permanency and unchangeability.
- 2) Social criterion is mentioned in most definitions as a criterion for intellectual impairment with the aim of deciding on how a child adapts socially and culturally to his immediate environment. The social criterion offers great flexibility.
- 3) Developmental criterion is mentioned in most definitions for intellectual impairment with the aim to find any delay in development which may be related to biological and/or psychological reasons in early childhood that could have serious consequences for the child's cognitive, physical, scholastic, and personality development.

The above criterion implies that intellectual impairment is not necessarily a static or permanent restraint, but a dynamic concept, which does not exclude the possibility of an improvement in the condition.

2.4.6.2 Causes of Intellectual impairment

The intellectually impaired are usually classified under different classifications or, which assist in the identification process of the causes of the different types of intellectual impairment. Professionals have typically classified children with intellectual impairment according to the severity of their problems. For many years, the American Association for Mental Retardation (AAMR) promoted the use of the terms *mild*, *moderate*, *severe*, and *profound retardation*, with each of these levels keyed to approximate *intelligence quotient (IQ)* levels (Hallahan & Kauffman, 1994:120).

In 1992, the American Association for Intellectual impairment recommended a radical change from this system of classification. It was recommended that children be classified according to how much support they need to function as competently as possible. There were at least three reasons for this recommendation: First, categorization according to the functional level of the child is better than categorization based on intellectual function. Second, this categorization allows children to achieve possible outcomes through appropriate support services. Third, when used in combination with consideration of adaptive skills, it results in descriptions that are more meaningful (Hallahan & Kauffman, 1994:120).

Kapp (1991:292-297) stated that although IQs are no longer the decisive factor for classification of intellectually impaired children in the educational set-ups, in most countries the intellectually impaired are divided into three groups for educational purposes, namely:

- Group I : IQ 50-75 Educable intellectually impaired
- Group II : IQ 25-50 Severely intellectually impaired
- Group III : IQ 0-25 Profoundly intellectually impaired

To be able to identify the causes of intellectual impairment, a clear distinction should be drawn between the causes of the milder levels of intellectual impairment and those of the more severe levels. With the mild levels of intellectual impairment there is no apparent cause for the impairment. The child's poor achievements are ascribed to either poor inherited intelligence or poor socio-economic environment, or to a combination of both. With severe intellectual impairment the cause is most predominantly organically identifiable; largely due to "organic factors and abnormalities in the brain" (Culatta & Tompkins, 1999:295).

2.4.6.2.1 Causes of mild and moderate intellectual impairment

Children under this subgroup function below the normal intellectual level, but their physical appearance is normal. The causes are complex, and it is usually difficult to determine which are of a primary or secondary nature. Some of these causes may be due to poor nutrition, poor health and medical services, language, educational style, and motivation (Kapp, 1991:297).

With the mildly impaired the causal factors usually arise in combinations, but individual factors are difficult to identify. Children who are labeled mild or moderate impaired are also sometimes referred to as those with *cultural-familial impairment*, due to under stimulating environments or un-stimulating parents, as well as some genetic factors (Kapp, 1991:293).

2.4.6.2.2 Causes of severe and profound intellectual impairment

For children with severe intellectual impairment there are specific organic causes for their impairment. A child with a pathological brain condition is usually identified before school and often at birth, because their syndrome is associated with recognizable external characteristics and symptoms. Kapp (1991:297-301) stated that the main causes for severe intellectual impairment can be grouped under the following categories:

- 1) Chromosomal deviations
- 2) Single gene abnormalities

- 3) Prenatal, perinatal and postnatal factors
- 4) Endocrinal disorders
- 5) Brain, skull and spinal abnormalities

In the next section, the researcher gives a summary of the different causes of severe and profound intellectual impairment to help in identifying these causes:

1) *Chromosomal deviations* are one of the major causes of severe intellectual impairment, they may develop at conception, and may hamper the normal development of the child to such an extent that he/she could be born with certain physical and mental characteristics (Kapp, 1991:298-299). There are two main types of chromosomal deviations: *autosomal chromosome deviations, sex chromosome abnormalities*.

- Autosomal chromosome deviation: The defect is in one of the 22 autosomal pairs of chromosomes. Some of the common syndromes under this grouping are Down's syndrome, and Cri du Chat syndrome.
- Sex chromosome abnormalities: The deviation is in one of the sex chromosomes. Some of the common syndromes under this grouping are Turner's syndrome, and Klinefelter's syndrome.

2) *Single gene abnormalities* are caused by deviations in one or more of the thousands of genes carried on the chromosomes that determine hereditary characteristics. There are three main types of single gene abnormalities: *dominant hereditary syndromes, recessive hereditary syndromes, and sex-linked hereditary syndromes*.

- Dominant hereditary syndromes: The effect of the defective gene is manifested in the skin and brain. Some of the common syndromes under this grouping are Tuberosc sclerosis, neurofibromatosis, and the Sturge-Weber syndrome.

- Recessive hereditary syndromes: These syndromes are transmitted recessively, appearing only if the child inherits the same abnormal gene from both parents. Some of the common syndromes under this grouping are Phenylketonuria, galactosaemia, Tay-Sachs syndrome, and Hurler's.
 - Sex-linked hereditary syndromes: The metabolic errors are so complex that they cannot be classified in any one class. Some of the common syndromes under this grouping are: Lesch-Nyhan syndrome, Cornelia de Lange syndrome, The Prader Willi syndrome, etc.
- 3) ***Prenatal, perinatal and postnatal factors*** where the chromosomal and genetic makeup of the infant is perfectly normal, but the brain is damaged by some harmful factor, that the child grows up mentally retarded.
 - 4) ***Endocrinal disorders*** are caused by hormonal imbalance Cretinism (hyperthyrea) is an example of such syndrome.
 - 5) ***Brain, skull and spinal abnormalities*** are another important cause for severe intellectual impairment. Because these develop in utero according to a complicated and set pattern, any harmful factors which hamper their normal development may lead to abnormalities in the brain, skull and spinal structure, which in turn may hamper the normal functioning of the brain. Some of these abnormalities are: *microcephaly, hydrocephaly, macrocephaly, craniostenosis*. Abnormalities of the spine such as spina bifida may also lead to intellectual impairment (Kapp, 1991:298-301).

2.4.6.3 Identification of Intellectual impairment

Children identified as intellectually impaired are incapable of learning the same things as normal children of the same age, but they can often learn the same material at a later time. The American Association on Mental

Retardation (AAMR) used to classify mentally retarded children under the terms: *mild, moderate, severe and profound*. In 1992, the AAMR recommended that children be classified according to how much support they need to function as competently as possible. The recommended levels of support are: *intermittent, limited, extensive, pervasive* (Hallahan & Kauffman, 1994:121).

The identification of mentally retarded children is done by using set procedures to measure *intellectual subnormality* and *social adaptability*. Intelligence tests are used to determine the intellectual sub-normality of individuals; and adaptive behavior scales or inventories are used to measure the individual's social behavior and adaptation in both the school setting and the child's surrounding environment.

The American Association on Mental Retardation requires two types of assessment for children to be identified as impaired. Intelligence must be tested, and adaptive behaviors must be analyzed (Turnbull et al., 1995:194). These assessments are:

1) Intelligence Testing

Intellectual functioning is measured by standardized intelligence tests, which usually consist of a series of questions and problem solving tasks assumed to require certain amounts of intelligence to answer or to solve correctly. The intelligence quotient (IQ) is based on the relationship between the child's chronological age (CA) and mental age (MA). Intelligence testing and outcomes may be influenced by motivation, time, the location of the test site, and poor testing procedure. Intelligence tests, when used appropriately, can be highly useful when making decisions for special education placements. They can be of real value in the design of appropriate instructional programs (Heward, 1996; Turnbull et al., 1995).

2) Adaptive functioning assessment

Adaptive functioning measurement is also required in the identification of intellectual impairment. To be classified as intellectually impaired, a child

must be clearly below normal in measurements of adaptive behavior. This means that there are clear deficits in the effectiveness to which the child meets the societal standards of personal independence and social responsibility expected of his age and social group.

Adaptive behavior measures are essential in identifying mild intellectual impairment and avoiding the misdiagnosis and misplacement of children with problems other than retardation. It is also a measure of how well children adapt to school and their immediate environment. Macmillan et al., (1996:358) stated that: "... *intellectual impairment can be understood only in terms of the child's cognitive inefficiencies and the environmental demands for problem solving...*".

2.4.6.4 Characteristics of Intellectual impairment

Intellectually Impaired children come from all levels of society. The level and/or degree of severity of their impairment effects their adjustment to the immediate environment, due to their limited intellectual and adaptive capacities. They are characterized by the level of instruction they need in order to learn. The mentally retarded vary physically, emotionally, as well as by personality, beliefs, and disposition. Despite their diversity, they share some common characteristics, some of which are cited in Hallahan and Kauffman, (1994:75):

- 1) Apparent slowness in learning related to the delayed rate of intellectual development.
- 2) They score significantly below average on intelligence tests.
- 3) They are not efficient or effective in the learning processes (attention, memory, and generalization skills).
- 4) They have an impaired ability to acquire, label, classify, remember, and use information appropriately.
- 5) They require extensive practice and repeated experience to learn successfully.
- 6) They have problems of self-regulation of their own behavior

- 7) They have problems with meta-cognition
- 8) They have delayed speech development
- 9) They have problems making friends or establishing social interactions
- 10) They may exhibit signs of helplessness and have re-current experiences of failure.
- 11) They have impaired learning capacities.
- 12) They appear impaired at introspection and imagination or imagery relative to their learning experiences.

In the sample of the population that is involved in the present study, some of the mothers have children with Down's Syndrome. For this reason, description of this syndrome is necessary in order to be able to understand and better relate to the significance of providing early intervention services for these children. In the next section a brief discussion of Down's Syndrome will help in understanding and relating to this type of impairment.

2.4.6.5 Down's Syndrome

In the section on causes of intellectual impairment, chromosomal deviations were mentioned as one of the major causes of severe intellectual impairment. Down's syndrome was cited as an example of autosomal chromosome deviation. Down's syndrome is one of the most commonly known forms of severe intellectual impairment. It is also known as Trisomy 21, because it is caused by the presence of an extra (third) 21st chromosome. There are actually three kinds of Down's syndrome. The types are identified on the basis of the way in which this additional chromosome originated. Kapp, (1991:298):

- 1) **Trisomy 21** (true Down's syndrome): is caused by an error during the meiosis division of the mother's sex cells, and is mostly found in older women.
- 2) **Mosaic-Down's syndrome**: the sex cells are normal but the division error occurs in the early embryonic phase. The child has both normal and abnormal body cells.

- 3) ***Translocation-Down's syndrome***: occurs in cases where either parent or ancestor has/had a structural chromosomal error, which led to a portion of the 21st chromosome adhering to another chromosome

2.4.6.5.1 Common characteristics of Down's Syndrome

Although children born with Down's Syndrome are more likely than typically developing children to possess certain characteristics, not all children are affected similarly, nor will the degree of involvement be the same. Variation exists in the physical development, medical conditions, mental abilities, and behavior of Down's children; because they have unique personalities, strengths, and needs (Spiker & Hopmann, 1997:112).

Kapp (1991:298) summarized some of the very distinctive traits of Down's syndrome as: "...fine straight hair; coarse skin; eyes that slant upwards with a fold of skin at the inner corner; a short nose with a low bridge; a small mouth; a tongue which seems large in relation to the rest of the mouth (protrudes and is deeply fissured); a short broad neck; broad hands with short finger and often just one horizontal palm fold; a short body; hypotonic muscles; a harsh voice with little variation in tone; low resistance to infection; intellectual impairment (IQ between 30 and 50).

The characteristics of Down's syndrome should be used as a means for understanding and supporting individual children within the specific contexts of their physical and social environments. Appl (1998:38-40) grouped the characteristics of Down's syndrome children into four groups: *physical and medical, intellectual, language, and behavioral*.

1) Physical and medical characteristics

- Distinctive appearance of their facial features (head shape, feet, and hands).
- Hypotonia or low muscle tone, excessive joint flexibility.
- Higher incidence of medical problems (cardiac defects, vision and hearing difficulties, respiratory and intestinal problems, obesity).

2) Intellectual characteristics

- Short attention span.
- Make slow progress in learning.
- Are less motivated in learning.
- Have problems with memory and imagery

3) Language characteristics

- Their expressive language is below their mental age.
- They may have auditory processing difficulties and oral-motor hypotonicity.
- Their speech is delayed and often unintelligible.

4) Behavioral characteristics

- Some show muted or delayed facial expressions.
- Some take less active roles in interactions.
- Some use more meaningless vocalizations.
- Have higher arousal thresholds.
- May take longer to react to stimuli and longer to calm down once they have reacted.
- They seem happy and cheerful, but sometimes are stubborn.

2.4.6.6 Educating the intellectually impaired

Educating the mildly and/or severely intellectually impaired children requires different type of instructions and methods in order to be able to offer each group the opportunity to progress at their own level. Kapp (1991:312-314) mentioned that in South Africa educating the intellectually impaired relies on many issues one of which is '*didactical principles*' that are applied purposefully, intensely and, consistently in order to allow for optimal child learning opportunities. Some of these principles are: 1) individualization, 2) totality, 3) motivation, 4) reduction of subject matter, 5) task analysis, 6) emphasis, 7) experiencing success, 8) fixation in memory, 9) regularity, 10) verbalization, 11) concreteness.

The curriculum is another issue that is considered. The curriculum taught for the two groups of intellectually impaired children differs in its content, and application. For the mildly intellectually impaired emphasis is placed on the functional aspects of the content of any subject matter. While for the severely intellectually impaired emphasis is more on some components such as: self-care, socialization, communication, perceptual-motor skills, religious development, recreational skills, and domestic skills (Kapp, 1991:314-315).

2.4.6.6.1 Educating intellectually impaired children in the USA

In the United States of America, services for children with intellectual impairment begin with *early intervention programs* that focus on providing guidance for families and a direct focus on the infant's acquisition of sensory-motor skills. Early intervention programs also provide parents with stimulation techniques that might facilitate intellectual development. Some *preschool programs* for children with intellectual impairment focus on school readiness and socialization activities. *Regular classroom programs* for children with mild and moderate intellectual impairment provide individualized programs, instructions, and interactions with non-disabled peers. *Resource room programs* are provided for some children while they attend a special services program part of the day for remedial help. In *self-contained classroom programs*, children with moderate and severe intellectual impairment are in a segregated classroom for most of the day (Culatta & Tompkins, 1999:86; Hallahan & Kauffman, 1994:139-140).

2.4.6.6.2 Educating intellectually impaired children in the Kingdom of Saudi Arabia

In the Kingdom of Saudi Arabia, the education for the intellectually impaired depends on the degree and severity of the child's mental capacity, and their chronological and mental age. Segregated services offered by the Ministry of Education (for boys), and the Presidency of Girls Education (for girls) provide services for children with intellectual impairment through the 63 different centres for the Mentally Retarded that are distributed around the country (Al-Maglouth, 1999:163).

These centres provide services for mild and moderately intellectually impaired children whose chronological age is between four and fifteen years old, with an intelligence quotient (IQ) between (50- 75). Two different types of programs are offered: a) *The Preparatory programs* (a two year program that prepares these children through sensory and tactile stimulation activities). b) *The elementary programs* (a six year program that offers a specific educational program that was devised by these centres, which teaches subject matters such as: reading, writing, religion, mathematics, science, and social sciences) (Al-Maglouth, 1999:163).

Children with severe intellectual impairment and/or multiple disability are offered services through institutionalized centres affiliated with the Ministry of Labor and Social Affairs. These children are provided with rehabilitation services and some basic activities of daily living skills (ADL). Most of the children are enrolled for *full-care* all-year-round services.

The first *day-care* centre for severe/profound intellectually impaired children was established under the auspicious of the Ministry of Labor and Social Affairs in 1990 in the city of Riyadh. The second day-care centre was opened in Jeddah in 1999. These centres provide services to families of severe and profound intellectually impaired and multiply disabled children as a relief and support from the pressures associated with raising these children. In the Kingdom of Saudi Arabia, some private centres and schools all over the country also provide programs for mild and moderate intellectually impaired children.

2.4.6.6.3 Educational programs for intellectually impaired children

In general, the focus of educational programs that offer services for intellectually impaired children varies according to the degree of the child's retardation, and/or how much support they require from their environment. The less the degree of intellectual impairment, the more the teacher emphasizes academic skills; and the greater the degree of retardation, the more stress is on self-help, community living, and pre-vocational and vocational training (Hallahan & Kauffman, 1994:138).

From the previous review of the characteristics of the intellectually impaired, one of the primary characteristics mentioned is that they do not learn as readily as other children of the same chronological age, because they can not learn information incidentally without special instructions on how to process this information. Some of the techniques suggested in educating the intellectually impaired as stated by Hallahan and Kauffman (1994:151-152) are:

- 1) Allow for success
- 2) Reinforce correct responses
- 3) Work at child's optimum level of performance
- 4) Use minimal change
- 5) Provide for repetition and sequencing of information
- 6) Limit concepts given in any one experience
- 7) Use cueing and prompting
- 8) Provide for concrete hands on experiences
- 9) Avoid abstract experiences and teaching

In the above section intellectual impairment in exceptional children was discussed. In the next section children with physical impairments will be discussed at length.

2.4.7 Physical Impairments

A physical impairment may affect the skeletal, muscular, and/or neurological systems. The term *orthopedic disability* is often used interchangeably with the term *physical impairment*. Federal legislation uses the term orthopedic disability, while special educators use the term physical disabilities or impairments (Hardman, Drew, & Egan, 1996).

Physical impairments imply that children have problems with the structure or functions of their bodies. Children with physical impairments are those whose physical limitations may interfere with school attendance or learning to such an extent that special services, training, equipment, materials, or facilities are required. Children with physical impairments may also have intellectual impairment, learning disabilities, emotional or behavioral disorders,

communication disorders, or special gifts or talents (Hallahan & Kauffman, 1997:396).

The fact that the primary distinguishing traits of children with physical impairments are medical conditions, health problems, or physical limitations emphasizes the necessity on interdisciplinary cooperation amongst the team members (Bigge, 1991:214). There is a tremendous range and variety of physical impairments. Children may have congenital anomalies (defects they are born with), or they may acquire their disabilities through accidents or disease after birth. Some physical impairment is mild and transitory, while others are profound and progressive ending in total incapacitation and early death. Physically impaired children require a great deal of attention, concern and intervention from the different disciplines like medical, therapeutic, social, educational, and of course the child's family. Because of the unique nature of each child's disability, there is a wide range in age and ability found in every child's performance and needs, which of course reflects the importance of individualization of the type of service offered for every child.

2.4.7.1 Definitions of Physical Impairment

The individuals with Disabilities Education Act (IDEA) defines physical impairment as one that *"...adversely affects a child's educational performance. The term includes impairments caused by congenital anomaly (e.g. clubfoot, absence of some body part, etc.), impairments caused by disease (e.g. poliomyelitis, bone tuberculosis, etc.), and impairments from other causes (e.g. cerebral palsy, amputations, and fractures or burns that cause contractures)..."* (23 Fed. Reg. 1977).

Blackhurst and Berdine (1981) compiled a definition that was stated in Kapp, 1991:419): *" A physically disabled person... is one whose physical or health problems result in an impairment of normal interaction with society to the extent that specialized services and programs are required..."*

Sometimes physical and health impairments are discussed together, but there are some relevant points that help in distinguishing between the physically disabled child and the chronically ill child. Kapp, (1991:420) mentioned some of these distinguishing points, which can be summarized as follows:

- 1) *Change*: the illness of the chronically ill child continually changes, while for the physically disabled their disability is permanent, unless operated on.
- 2) *Pain*: chronically ill children usually experience pain, while physically disabled feel pain associated with muscle contractures.
- 3) *Medication*: the chronically ill child uses medicine as part of his life, while the physically disabled use medicine only when prescribed.
- 4) *Uncertainty*: the outcome of the illness and possibility of complications with the chronically ill child; while for the physically disabled child it is a medical condition that can be diagnosed by a doctor.
- 5) *Conspicuousness*: the physical impairment of the child is conspicuous, whereas the chronically ill child is usually not.

Multiple disorders result in difficulties for the child and the persons dealing with him/her. But its important to try and classify the child under one category in order to be able to focus-in on the characteristics of the identified group so as to relate and offer better individualized services.

2.4.7.2 Causes of Physical Impairment

Medical research over the years has helped in advancing knowledge as to the reasons why some children are born with certain forms of disabilities. The following are just a few of the causes of physical impairments as mentioned (Kruger, 1996:19-21):

- 1) Genetic malfunctions.
- 2) Traumatic brain injury (TBI).
- 3) Heredity.
- 4) Drug and unsupervised intake of medication.
- 5) Exposure of mother to radiation.
- 6) Malnutrition and under nourishment of mother.
- 7) Accidents.
- 8) Anoxia.
- 9) Encephalitis and meningitis.
- 10) Childhood illness (high fevers, rubella, recurrent infections)

One of the most common causes of physical impairment in children is damage to or deterioration of the central nervous system, the brain or spinal cord. Damage to the brain may be mild so that it does not effect the child's functioning. Or it may be profound as to reduce the child's physical or cognitive functioning to a very low level. There may be focal brain damage involving a specific area, or diffuse brain damage. A child with brain damage may show a wide variety of behavioral symptoms, such as intellectual impairment, learning problems, perceptual problems, lack of coordination, distractibility, emotional or behavioral disorders, and communication disorder (Hallahan & Kauffman, 1997:399-400).

Other symptoms that indicate brain damage or malfunction are impaired motor function, paralysis, and certain types of seizures. Neurological impairments due to damage of the spinal cord are yet another kind. Damage to the cord may mean that the child could lose sensation, be unable to control movement, or be incapable of feeling or moving certain parts of their body (Hallahan & Kauffman, 1997:399).

2.4.7.3 Identification of Physical Impairment

A physician usually performs the initial evaluation that determines whether a child has a particular health or physical impairment. The follow-up of children with health and/or physical impairments requires collaboration between professionals more than that of children with other impairments. A comprehensive identification would assess the many relevant areas required to provide a physically impaired child with the least restrictive environment. Culatta and Tompkins (1999:247-249) mentioned some of these areas:

- 1) Activities of daily living.
- 2) Mobility Assessment.
- 3) Physical abilities assessment.
- 4) Psychosocial abilities assessment.
- 5) Communication assessment.
- 6) Academic potential assessment.
- 7) The Setting Assessment.
- 8) Assistive technology assessment

Because health and physical impairments are so varied, it is more efficient to discuss some of these disorders and highlight their most important features in order to understand their signs, symptoms, occurrences, and causes. Culatta and Tompkins (1999), Kruger (1996), and Hallahan and Kauffman (1997) discussed these different impairments, the following is a summary of some relevant features of these impairments.

Physical impairments are of different origins and causes. They are usually grouped under any of the following groupings: *health impairments, chronic sickness, orthopedic (neurological) impairments, and skeletal and/or muscular impairments*. Culatta and Tompkins (1999:233-240) grouped physical impairments under *Orthopedic impairments*. Examples of which are the following:

- 1) Cerebral palsy
- 2) Seizure disorders (epilepsy)
- 3) Multiple sclerosis
- 4) Spina bifida
- 5) Traumatic brain injury

Hallahan and Kauffman (1994:402-411) grouped physical disabilities under *Neurological impairments* and *Musculoskeletal conditions*. Examples of neurological impairments are the following:

- 1) Cerebral palsy
- 2) Seizure disorders (epilepsy)
- 3) Spina bifida
- 4) Traumatic head injuries

Examples of musculoskeletal conditions are the following:

- 1) Muscular dystrophy
- 2) Juvenile rheumatoid arthritis
- 3) Congenital malformations

Kapp (1999:420-428) grouped physical disabilities under *Neurologically related physical disabilities* and *Physical disabilities of the skeleton and*

muscle systems. Examples of neurologically related physical disabilities are the following:

- 1) Spina bifida
- 2) Traumatic paraplegia and quadriplegia
- 3) Post-poliomyelitis
- 4) Other neurologically related physical disabilities such as spinal muscular atrophy, muscular dystrophy, and multiple sclerosis

Examples of physical disabilities of the skeleton and muscle systems are:

- 1) Amputations
- 2) Arthrogryposis (congenital multiple contractures)
- 3) Osteogenesis imperfecta
- 4) Burn lesions
- 5) Other physical disabilities of the skeleton and muscle system which are the result of a chronic illness

In the following section some of the different groupings of physical impairment will be discussed (Kruger, 1996:17-19; Hallahan & Kauffman, 1997:403-408; Culatta & Tompkins, 1999:233-240; Kapp, 1991:421-423):

2.4.7.3.1 Neurological and Musculoskeletal Impairments

- 1) **Cerebral Palsy**: is a disorder that affects movement and posture, as a result of brain damage. Its causes may vary depending on the origin of the disorder. Cerebral palsy is usually caused by oxygen deprivation prior to birth, during the birth process, or immediately after birth. Depending on the severity of the condition, cerebral palsy children may not be able to adequately control their movements.

The three major types of cerebral palsy are spastic (characterized by stiff, tense, poorly coordinated movements); athetoid (characterized by purposeless uncontrolled involuntary movements and contorted purposeful movements), and ataxic (characterized by balance problems, poor depth perception, and poor fine and gross motor skills). A child with

cerebral palsy may exhibit any one of these types, or have a combination of all the different types (Culatta & Tompkins, 1999:233).

Problems associated with poor movement and balance skills may complicate the cerebral palsy child's educational achievement abilities. These children may also have other conditions associated with their physical impairment, such as, sensory, perceptual, seizures, and communication disorders. Cerebral palsy cannot be changed, but with proper management of the child's condition, some of the physical damage can be controlled by strengthening posture, and compensating for some functional skill deficiencies.

- 2) **Epilepsy** is considered to be one of the most common neurological impairment in children. Seizures are the result of spontaneous abnormal discharges of electrical impulses in the brain. Epilepsy is a disorder characterized by recurring seizures. Seizures may be of unknown origin or may appear after accidents or high fevers injuring brain tissue. (Cullatta & Tompson, 1999:234). There are three types of seizures: *petit mal*, *grand mal*, and *complex partial seizure*. Kapp (1991:256) defined epilepsy as *a sudden disturbance of or change in brain function as a result of unusual electrical activity in the brain cell*. Also epilepsies were grouped under two broad categories: general seizures, and partial seizures (Kapp, 1991:257)

Seizures may occur as isolated one-time events or may take place many times each day. Bright lights, certain sound combinations, or even odors can initiate them. An aura or warning can sometimes signal that a seizure will be occurring. Auras can take the form of an increase in sensory perception in taste, smell, visual perception, or hearing sensitivity. Treatment often focuses on control of seizures through some medications (Culatta & Tompkins, 1999:234).

- 3) **Multiple Sclerosis** is a degenerative neuromuscular disease that destroys the myelin sheathing that surrounds and protects the nervous

system. It could be the result of a virus that causes the body to attack and destroy healthy myelin tissue as if it were an invading disease. Initial symptoms include muscle weakness, poor coordination, and fatigue. If the degenerative process continues tremors, spasticity, blindness, or severe visual impairment and speech slurring are possible. There is no known cure for multiple sclerosis, but physical therapy helps keep children affected by this condition as strong and healthy as possible (Culatta & Tompkins, 1999:235).

4) **Muscular Dystrophy** is a hereditary neuromuscular disease, where muscles become progressively weaker as muscle tissue is replaced by fat and fibrous cells (Tumbull, et al, 1995.p.581). It is usually transmitted to male children from their mothers. Its cause is unknown but it covers any of nine hereditary muscle-destroying disorders. The most common is the Duchenne type.

Cross (1993:49) stated that muscular dystrophy progresses slowly. Initial signs may include difficulty in walking and climbing stairs and an awkward swaying walking pattern. Rising from a sitting position can be a problem. As the disease progresses, children find it difficult to rise after falling, show some back deformities and protruding abdomens. During the final stage, children become bedridden and totally dependent on others.

Often by the age of ten, the child loses the ability to walk and will need a wheelchair to move about. Muscular dystrophy is not curable and death is usually attributed to heart failure or lung failure as a result of muscle weakness (Heward, 1996:131).

5) **Spina Bifida** is a prenatal developmental defect caused by the failure of the spinal column to properly seal around the spinal cord, so that both the spinal cord and the meninges are unprotected. This damage prevents the nerves of the spinal cord from transmitting messages from the brain to other parts of the body (Culatta & Tompkins, 1999:236).

Depending on just where on the cord the damage occurs (the closer to the neck the more severe the symptoms), and the number of nerve fibers affected, this condition could cause infections, brain damage, or paralysis.

There are three types of spina bifida: a) *spina bifida occulta*, b) *meningocele*, and c) *myelomeningocele*. Myelomeningocele is the most damaging type, usually leading to neurological impairments. The most problematic condition with spina bifida is hydrocephalus, which is a buildup of cerebro-spinal fluid on the brain that fails to drain and if untreated can cause destruction of brain tissue and subsequent intellectual impairment. The use of a shunt surgically implanted in the brain relieves the pressure by transferring the built-up fluid into the bloodstream before it can cause damage (Culatta & Tompkins, 1999:236-237).

Physical impairments could be identified at three periods during the child's early life: *prenatal*, *neonatal*, *postnatal*. Sometimes the impairment of the physically impaired child may also be identified as early as while he/she is in the mother's womb, during delivery, or immediately after delivery.

2.4.7.4 Characteristics of the Physically Impaired

It is impossible to generalize about most of the characteristics of physically impaired children because they vary so widely in the nature and severity of their conditions. How they adapt to their physical impairment and limitations, and how they respond to social-interpersonal situations depends on how parents, teachers, peers, family, and their immediate environment react to them (Hallahan & Kauffman, 1994:385-387).

But one commonly shared characteristic is that they experience problems in the area of mobility and physical vitality. Kapp (1991:420), Hallahan and Kauffman (1997:416-418) mentioned some of these major characteristics of the physically disabled:

- 1) They have problems with their self esteem.
- 2) They are conscious of the negative reactions from people to their obvious physical impairment.
- 3) They experience "being different" from others due to their physical condition.
- 4) Some may have academic problems due to their re-occurring absences from school.
- 5) Some learn well with ordinary teaching methods while others require special methods and adaptations.
- 6) They have some affective and social problems.
- 7) They are sensitive.

2.3.7.5 Educating the Physically Impaired

Educating children with physical impairments is not so much a matter of providing special instruction for these children, but it is educating the non-disabled how to deal with these children. Physically impaired children's lives are often needlessly complicated because the non-disabled sometimes give no thought to what life is like for someone with specific physical limitations. But designing adaptations in building, furniture, household appliances, and clothing can make it possible for a child with a physical impairment to function as efficiently as a non-disabled child in a home, school, and community (Weham,1997:134).

Many physically impaired children under the age of three require both special education and related services. By the Individuals with Disabilities Act (PL 99-457) these children are required to have an individualized family service plan (IFSP), which specifies how the family will be involved in intervention and other services provided for their child (Hallahan & Kauffman, 1997:425). It is not possible to prescribe educational goals and curricula for children with physical disabilities as a group because their limitations vary so greatly from child to child. Even among children with the same condition, goals and curricula must be determined after assessing the individual child's intellectual, physical, sensory, and emotional characteristics.

For children with only a physical impairment, curriculum and educational goals can be the same as for non-disabled children: reading, writing, arithmetic, and experiences designed to familiarize them with their immediate environment. In addition, special instruction may be needed in mobility skills, daily living skills, occupational skills, and the use of technical aids that will help them perform simple tasks (Bigge, 1991:219).

The range of educational objectives and curricula for very young children with a severe neuromuscular physical impairment can even extend to basic self-help skills such as swallowing, chewing, or even self-feeding. Some of these children are taught through a comprehensive system, where emphasis is placed on stimulating the child's senses according to growth and changes in behavior and developmental stages.

Some of the suggested principles to use in teaching physically impaired children were mentioned by Hallahan and Kauffman (1997:425-428); and (Kapp1991:429- 431):

- 1) Teach according to the child's level of development.
- 2) Use systematic instruction.
- 3) Use appropriate curricula to meet the child's individual development.
- 4) Work within a team approach to provide comprehensive services for the child.
- 5) Coordinate amongst the team members to plan better services for the child.
- 6) Provide early and continuous intervention for the child.
- 7) Provide objective evaluation of the child's performance level, in order to have proper individualized goals that meet the child's level of development.

2.5 *Future educational services for exceptional children*

In the United States, South Africa, and many European countries, because physically disabled impaired children have unique problems, depending on the

degree of their impairment, they either attend mainstream classes or schools with special education classes. Due to their particular problems, some need specialized instructions that is child-oriented and very individualized (Kapp, 1991:434; Smith & Luckasson, 1995:213).

Some physically impaired children are either mainstreamed and/or included in the regular school system. The Individuals with Disabilities Education Act (IDEA) in the USA, helps in ensuring the most appropriate education and services for these children. This law requires the regular school system to providing them with the least restrictive environment according to their individualized needs. The younger children receive services according to an Individualized Family Service Plan (IFSP) (Culatta, & Tompkins, 1999:250-252).

In the Kingdom of Saudi Arabia, the choices of schooling offered for disabled children in general and physically impaired children in particular, are somewhat limited. There are very few public schools in the large cities that accept mainstreaming children in their classrooms. Since 1995 the Ministry of Education for boys, and since 1998 the Presidency of Girls Education have been trying to enforce provision of mainstreaming disabled children into the regular classrooms. But this move has been faced with many limitations and drawbacks, some of which are cited by Al-Hoqail (1996:171-177):

- 1) Improper diagnosis of some impairment.
- 2) Poor identification of impaired children, due to lack of availability of standardized assessment tests that are more culture specific.
- 3) Limitations in specialized Arabic speaking teachers and professionals in the different disciplines.
- 4) School personnel who are not familiar with disabilities and how to treat and/or teach a special needs child.
- 5) The general public is still not quite prepared on handling the impaired according to their impairment.
- 6) Peers in the schools are not educated on how to interact with a special needs child

Some private schools and special centres for special needs children offer specialized services for the different impairments (see appendix 5 for details of the names of these centres).

2.6 Summary and conclusions

From the above broad review of the different impairments and the different groupings of exceptionalities, it is only right to start looking at the present and plan for the future of these exceptional children and individuals. This overview of the different exceptionalities should help in realizing the changes that have happened in the field of special education in the United States, the Kingdom of Saudi Arabia, and South Africa. The new expected outlook is toward enhancing the different services that may suit the needs and expectations of the very young special needs child and his/her family through the provision of early intervention services.

Some of the major trends and issues that are destined to affect, change and modify the future of the services offered to this population of society are mentioned in Hallahan and Kauffman (1997:418-432):

- 1) The fundamental shift in the view of causes of impairments and exceptionality.
- 2) The new and changing legislation.
- 3) The increased interest in the families of the exceptional children, and their views of the impairment of their children.
- 4) The family's involvement and rights in the planing of their child's goals.
- 5) The move toward inclusion and full inclusion for their children.
- 6) The rapid and growing emphasis on early childhood education and early intervention.

The above mentioned issues are the constant concern of professionals and advocates in the field of special education, and around them evolve many other issues that are linked and effect each other directly and indirectly.

Professionals, parents, and policy makers now agree that it is society's responsibility to provide needed services for any and all disabled children, because these exceptional children are members of society. Therefore, they are entitled to living a most appropriate life in coherence to their abilities and needs.

The early years constitute a unique phase for influencing the child's development, and supporting families to maximize long-term benefits for all concerned. Therefore, society and professionals are responsible to provide early intervention services and programs for these exceptional children with established disabilities and their families, to allow them opportunities to learn and be part of their society.

CHAPTER 3

Early Intervention

3.1 *Introduction*

In chapter two an overview of the different exceptionalities was given to help in better relating to the different aspects influencing these different exceptionalities. With the general knowledge received from the previous chapter, it is quite clear that there have been dramatic changes in the last ten years in the field of special education. The new outlook on impairment has moved away from looking at these children as disabled; towards allowing these children to learn and interact with their environment according to their individualized abilities and needs.

In this chapter focus is on the newer trends of providing specialized services to exceptional children and their families at a very young age. This chapter will help to find answer to some of the problems stated in this study, to help identify the significance of early intervention services, and how such services can be matched to the needs of the mothers of exceptional young children.

Most professionals realize that the earlier in life an impairment is identified, and the child's level of performance and particular needs are established, the sooner a specified educational or treatment program is set and started. The child and his/her family can benefit and get on with their lives in a much more stable manner once the problem has been identified and a plan of intervention has been set (Hallahan & Kauffman, 1997:71)

The relevance of early intervention services can be argued from three major points: Firstly, a child's early learning experiences provide the foundation for future learning. The sooner a special program of intervention is agreed upon between the parents of the child and the professionals, the more the child is likely to learn new skills. Secondly, early intervention provides support for the child and his family to help prevent the child from developing additional

problems or impairments. Thirdly, early intervention can help families adjust to having a special needs child, teach parents the skills to handle a disabled child effectively at home and provide families with additional support services they may need such as counseling, and/or financial aid (Slentz & Bricker, 1992:14).

If an exceptional child's impairment is recognized and identified at an early age, and intervention by the necessary professionals is well coordinated, the child's learning and development can often be greatly enhanced. The development of effective early intervention programs can hopefully help in decreasing the degree of impairment that results from being born with a specific condition or acquiring an impairment during the early childhood years. Early intervention is a process where very young deprived, impaired, exceptional, or at-risk children and their families receive different support services to help them in dealing with their unique situation (Hallahan & Kauffman, 1997:71).

Early intervention programs can make a significant difference in the developmental status of very young children, and can do so more rapidly than later remedial efforts after a child has entered elementary school. In the early years the initial pattern of learning and behavior of a child, which set the pace for and influence the nature of all subsequent development is established (Peterson, 1988:6).

Early learning and training can minimize possibilities that an exceptional child will develop secondary impairments, and will increase the chances that developmental skills will be acquired when they otherwise may be delayed or simply not learned. Intervention can reduce the limitations that an impairment may impose upon a child's ability to learn from and interact with the environment (Peterson, 1988:13)

3.2 *The rational for early intervention services*

The rational for providing early education and intervention for exceptional children is based upon a number of different arguments derived from *theory, empirical research, expert opinion, and societal values*.

- 1) **Theories** such as Piaget's theory of cognitive development help to understand what factors facilitate or impair growth, development, and learning in young children.
- 2) **Empirical research** on cognitive development, early stimulation, environmental effects and other factors that influence young children's growth and development is very crucial in supporting the issue of early intervention (Carta, Schwartz, Atwater, & McConnell, 1991; Bredekamp & Copple, 1997; Guralnick, 1997).
- 3) **Expert opinion** of professionals concerning social and educational problems and other relevant areas are usually based on both theory and empirical research, and therefore provide sound ground work to supporting the issue of early intervention (Brinker, Baxter, & Frazier, 1992; Eiserman, Weber, & McCoun, 1995).
- 4) **Societal values** are a powerful force in the decision-making process that influence areas related to education and human-rights issues which directly and indirectly effect early intervention services (Dunst, Trivette, & Deal, 1994; Hanson, & Lynch, 1992; Singleton & Straits, 1993).

In the early years of a child's life the initial patterns of learning and behavior set the pace for and influence the nature of all subsequent development. The time from birth and until a child enters school is a very significant period in the continuum of human development. During these years, (a) growth is extraordinarily rapid, and (b) basic traits in the areas of motor, sensory,

cognitive, physical and social-emotional development provide a foundation for all subsequent learning.

Mahoney, Boyce, Fewell, Spiker, and Wheeden (1998:6-7); Campbell, and Ramey (1994:686) argued that the philosophy for providing early intervention services may be based on the following arguments which highlight some main areas of concern:

- 1) Early intervention provides services for both the child and his family by providing support and help in better understanding and relating to the child's problem at hand.
- 2) Early intervention can help families adjust to having a special needs child and find other support services they may need.
- 3) A child's early learning of the initial patterns of learning and behavior provides the foundation for future development of subsequent skills.
- 4) A child's environment and early learning experiences have a major effect upon development and learning.

3.3 *The objectives of early intervention services*

The major objective of early intervention services is to prevent or minimize developmental problems for at-risk or deprived children. This preventative philosophy also extends to children with established impairments, in order to reduce or minimize related problems that may compromise development. Many professionals, with respect to broad principles that guide early intervention programs, have agreed that successful early intervention must centre on:

" the needs of the families; be able to thoroughly and efficiently integrate the contributions of multiple disciplines; and coordinating and implementing goals of all the involved disciplines together in order to ensure maximum benefit for the child and his/her family " (McBride & Peterson, 1997:211).

Impaired children should no longer be seen as handicapped or unable to live according to their abilities. On the contrary, with the firm belief that an impaired child is ' *exceptional* ' in their own way and can be taught to learn and interact

within their unique abilities, they can become active in their environment. It is the roles of professionals and active members of society to help and support the families of exceptional children by providing them with as early as possible intervention services.

3.4 *Supporting research relating to early intervention*

Research relating to the influence of child and family characteristics on early intervention outcomes is very crucial especially when it is related to emerging risk factors and populations. Similarly, research on parent-child interactions, can measurably advance the understanding of the effectiveness of programs. The literature gathered while reviewing the issue of early intervention and the effects of parental involvement on the exceptional child, has primarily been from studies and research projects done by individuals and/or groups in the field of special education and other related fields in the Western World in countries such as the United States, and Europe.

3.4.1 *The role of the professional in family-centred service programs*

As the field of early intervention moves from a child-centred to a family-centred model of service delivery, there is also a shift in power differentials. In the early 90's professionals tended to operate primarily in an expert role, defining the nature and type of services for children, with families assuming a subordinate role (Shelton & Stepanek, 1994:45).

Recently, this shift also called for professionals to relinquish some of their power and move toward family expertise; where needs are recognized, supported and nurtured (Dunst, Trivette, and Deal, 1994:114). Currently, the capability to build collaborative partnerships with families based on equality and shared decision-making is considered a critical skill for early interventionists (Winton, 1995:299).

Professionals can provide services that enhance the well-being of families, which directly and/or indirectly will enhance the social development and emotional well being of children. First professionals can offer support to the parents in learning ways of interacting with their infant that fosters development. Second, professionals can offer centre-based educational services as well as reliable, a few hours away from the burdens of child care which may free parents to address other pressing needs.

3.4.2 *The role of the family and its influence on the development of the child*

Culturally, the meaning of 'family' varies a lot depending on many variables and never really has any one specific definition because people come from different backgrounds and have different morals and beliefs. Subjectively, the meaning of 'family' again varies, because it has a particularly interesting developmental course over a lifetime. Starting at one's own family, moving to a child's sense of family, then progressing to a new meaning when this child establishes his own family as an adult and parent. Without the consensus on the meaning of family it would be difficult to achieve a consensus on what 'family-centred' refers to or actually is (Brinker, Baxter & Frazier, 1992:8).

Every family has its unique needs and concerns in raising a disabled child. Family-centred intervention is the current trend in providing early intervention services for exceptional children and their families, and it is based on the notion that families have individualized needs that have to be met. Family-centred intervention is based on a dominant cultural prototype of families as autonomous, self-enhancing systems of decision-making. Whatever the negotiated definition of a family, it is unlikely that the interventionists will have relationships with all family members. But it is critical to define the constraints of the meaning of "family" as well as the limits of the interventionists intrusion into a family's circle (Slentz & Bricker, 1992:13).

Families from different backgrounds have different attitudes toward impairment, parenting, and interacting with professionals; different styles of

interaction; and different beliefs about the causes of childhood disability which in turn affects their perception of the value of intervention services. Because families are so diverse, assertions about approaches to serving them can easily become abstract dogma (Darling, & Baxter, 1996:6-10).

The family's importance in a child's development has been well established. Also the influence of social systems on the child and family development is now widely accepted. These ecological frames of references highlight the importance of immediate settings in which the child and his family live. When service systems acknowledge the family systems in which children live, support families as well as children, and develop collaborative relationships with parents, the development of the child and the lives of both family and child are enhanced (Brinker, 1992:311). Therefore, early intervention should be family-centred rather than child-centred.

Family-centred services are designed to include the family as decision-makers and to ensure that the full range of needs expressed or needed by a family is addressed and met. Although there is an increased awareness of the need for family-centred services, there is great diversity in the way programs define and implement such an approach of service delivery. As programs begin to make changes to implement more family-centred services, there has been growing recognition of an implementation gap between what is valued and what is practiced by professionals (Murphy, Lee, Turnbull, & Turbiville, 1995:27).

A leading assumption among early interventionists is that support for parents will lead to better care for children and better child development. This assumption is supported by observations that mothers and infants interact better when the mother has good social support (Dawson, Robinson, Butterfield, Van-Doorninck, Gaensbauer, & Harmon, 1990:31). Intervention effects on child development were unlikely to occur unless mothers modified their style of interacting with their child. The mothers' level of responsiveness was associated with their children's developmental progress and outcomes.

In the 1980's several early intervention demonstration projects incorporated information regarding parent-child interactions into the intervention design. But only recently has there been recognition that these interactions may have critical implications for the actual design of the early intervention services (Sandall, 1993:130).

3.4.3 *Parental involvement*

A clear distinction has to be made while discussing the subject of families and parents of exceptional children. Families imply the mother, father, and siblings (Darling & Baxter, 1996:25). While parents imply only the father and mother of the exceptional child (Darling & Baxter, 1996:11). This distinction will help while discussing issues such as the role of the parents and parental involvement, the roles and rights of families of exceptional children.

Many studies done on the subject of parental involvement, deal with certain issues such as: the changing theories about the roles of parents and families in their children's development; the increasing awareness of the complexity of family issues surrounding the care of their disabled child; the heightened sensitivity to the moral and legal rights of parents; and the support by the federal laws of parents and their influence as full partners in all decisions, policies, and activities carried out for their child (Robinson, Rosenberg, & Beckman,1992:139).

Research relating to the subject of the formal participation of parents in therapeutic and educational programs for their special needs child has evolved considerably over the past 20 years in the United States and other leading countries. In a study by Able-Boone, Sandall, Stevens, and Fredrick (1992:93-95) the effects of family needs were discussed to find any implications of their needs on early intervention services.

Daneco (1997:42-44) discussed issues such as parental beliefs on child development and how those beliefs can influence the actual progress and achievement of new skills in their special needs child. Also the issue of cultural

beliefs about a child's impairment were discussed. Results signified how the culture into which an impaired child is born and raised may have certain influences on accepting and handling this exceptional child. Where some pressures may be put on the parents of this child therefore affecting the interactions and relations between the child and his/her parents. Some program models in the early 1990's called for passive observation by the parents of the exceptional child during the planned services. And/or acceptance of professional intervention while seldomly discussing the parent's views and opinions on their child's suggested goals and plans (Frey, Greenberg, Fewell 1989; McLinden 1990; Beckman 1991).

Early literature in the field of developmental impairments, projected professionals' roles as one of helping families adjust to or cope with their situation, mainly in terms of acceptance and/or rejection of their child. Early efforts to involve parents were dominated by a clinically oriented educational and therapeutic service model, in which the focus was on the specialized instructional and therapeutic activities that professionals provided to address children's learning and developmental needs, with minimal parental involvement (Foley, Hochman, & Miller, 1994:21).

This professionally driven model viewed children's success in early intervention as contingent upon their exposure to and participation in the specialized activities and experiences that took place in clinical settings. But contemporary family-centred early intervention services have shifted towards enhancing and supporting the effectiveness of families caring for their children. Tocci, McWilliam, Sideris, and Melton (1997:145) suggested that parents should get involved in an early intervention program as soon as possible to help their child, and parents value support from and connection with other parents in the same program.

3.4.4 Parent-child interaction

Some families may recognize a possible delay in their child's development, but have difficulty finding the right avenues to gain access to available

services. Other parents may not recognize that a delay is a reason for intervention due to cultural, economic, religious, or other reasons. In the 1980's and early 1990's several early intervention projects incorporated information regarding parent-child interaction such as: developmentally appropriate intervention (Garwood & Sheehan, 1989); stress factors on families (Beckman, 1983); coping styles of mothers with disabled children (Kirkham, Schilling, Norelius, & Schinke, 1986:91) into the intervention design of their programs. But only in the mid-90's has there been more recognition in the research regarding parent-child relationships that may have critical implications for the actual design of early intervention services (Sandall, 1993; Thorpe & Mc Collum, 1994).

The ways of interacting with infants/children, the schedules of daily-routines, and the organizations of the physical environment can either facilitate or hinder development and learning. But with the proper directiveness and coordination from both the team and the child's family, the child's development and learning should flourish. Professionals have a responsibility to ensure that the experiences of infants/children are designed to promote and not to interfere with or hinder development and learning.

Bricker and Cripe (1992:10-11) discussed how most intervention efforts have been conceptualized primarily from a child-focused, directive teaching framework. Where the progress of children's development in cognition, language, social, and motor functioning has been linked to increasing the frequency of children's participation in specially designed learning activities and routines to help children acquire the skills and concepts that are logically, intuitively, or empirically related to desired developmental outcomes.

Guralnick (1997:25), and Mahoney, et.al. (1998:7) discussed the relationship of parent-child interactions and its effects on early intervention programs for exceptional and at-risk children. Their findings supported the notion that frequent and stable interactions between mothers and their young children in vocalizing, and playing interactively enhances their child's growth and involvement.

3.5 *Types of early intervention services*

Most intervention efforts have been conceptualized primarily from a child-focused directive teaching framework (McBride & Peterson, 1997:211). The acceleration of children's development has been linked to increasing the frequency of children's participation in specially designed learning activities and routines which are designed to help children acquire skills and concepts that are logically, intuitively and empirical to proper developmental outcomes.

Service delivery models should recognize that the child is part of a family unit, which means being responsive to the family's priorities, concerns and needs; allowing the family to participate in early intervention with their child as much as they desire (Hanson, & Lynch, 1992:289). Services must be geared toward both the child and other members of the family allowing for flexibility and expertise to provide for the most resourceful service. But considering the enormous diversity of families, it is best to individualize practices for each child and its family, in order to represent most families' values and beliefs.

Summers, Dell' Oliver, Turnbull, Benson, Santelli, Campbell, and Siegal-Causey (1990:82-84) found that some families and service providers wanted early intervention services to be formal processes, responsive to their preferences and supportive of the family as a whole. Similarly, Able-Boone, Sandall, Stevens, and Fredrick (1992:95) reported family preference for informal approaches directed at family issues. Some families expressed a preference for a positive interaction-style and relationship when describing their preferred service provider. Knafel, Breitmayor, Gallo, and Zoeller (1992:91). Which only means that families views of the extent of their involvement in their child's service plan depends on the social style of the family and their preferences in dealing with service providers.

3.5.1 Family-centred services

In the last ten years, changes have been very rapid in the services provided by different early intervention programs in the USA. The focus is currently more

on family-focused services where the parents have a major effect on their child's educational and treatment plans (Brinker 1992; Darling, & Baxter 1996; Dunst, Trivette, & Cross 1994; Gallagher 1990). Family participation or involvement in their child's early intervention program has been accepted as both a necessary and valuable practice since the 1970's. Over the past two decades families' outlooks, needs, and demands have changed and early intervention services have also changed. But the actual involvement of parents has only been since the 1990's. (Hanson & Lynch, 1992; Vincent & Salisbury, 1988; Vincent, Salisbury, Stain, McCormick & Tessier, 1990)

The passage of the Individuals with Impairments Educational Act (PL 99-457) in October 1986, confirmed the need for active involvement and participation by families in not only the early intervention process of their own child, but also the development of such early intervention systems and services (Garwood & Sheehan, 1989).

Summers, et.al. (1990:37) stated that: "*...a critical void in the field of special education at this time is the lack of a theoretically grounded, empirically based and family-friendly framework for conceptualizing expected family outcomes in early intervention...* ".

The passage of the two American laws, the Individuals with Impairments Education Act (PL 99-457) in 1986, and the law that authorized early intervention programs for infants and toddler, namely (PL 102-119) in 1991, provided for this void. A renewed interest in families among special educators who work with very young children arised. The enactment of the law provided both an opportunity and a challenge, by forcing early intervention professionals to look beyond the child and the parent-child dyad toward the larger unit the family and then society, in an attempt to understand the developmental needs of young children and their families.

Mahoney and Filer (1996:442) stated that federal early intervention legislation was developed to promote three goals for parents and family involvement:

- 1) To broaden the scope of family services to include the full range of support services needed to help parents adjust and cope with the stresses and demands associated with raising a disabled child.
- 2) For parents to become fully involved in the planning of the Individualized Family Service Plan (IFSP) for their child.
- 3) For parents to become full partners in the early intervention process.

Recommended practices in early intervention include families as decision makers on behalf of their special needs child. The involvement of families is more than giving advise about how to interact with and raise their young children with special needs. Rather family participation is the creation of a collaborative partnership based on trust, equality, and mutual respect between the professional team members and the family for the sake of the child.

In a study by Minke and Scott (1995) a model was proposed to facilitate staff members' capacity to view parental assertiveness and control as a positive characteristic, assisting them to focus their work with families on relationship building and support rather than struggling with them for control.

Early intervention services are in transition, so many programs are moving from the traditional child-oriented models of intervention, to the contemporary family-oriented models that stress supporting and strengthening families. The Individuals with Impairments Education Act requires Individualized Family Service Plans (IFSPs) as part of services for infants and toddlers who are birth-to-three years, and staff are expected to work closely with parents in developing these plans.

Recommended best practice suggests a family-centred perspective that includes highly active decision making roles for parents in the actual assessment, planning, and program implementation of their child. The collaboration and negotiation central to Individualized Family Service Plan development within this approach requires professionals to interact with families in ways that gives some authority previously held by them to the

parents, and requires finding common ground of shared goals to help in enhancing and developing the child's individual skills

Early intervention practitioners in the 1990's are experiencing a renewed interest in the roles of families in their programs. This has been noticed in three ways: 1) an increased effort to implement family-centred approaches more fully, with parent's active participation in decision-making. 2) an increased emphasis on collaboration in the development of family-oriented practices. 3) the development of services for others in the family (Darling & Baxter, 1996:10-11).

Therefore, parents are no longer seen as passive recipients of didactic professional opinion, but they share in the decision making process. Parent-professional collaboration was found to be an essential component of successful early intervention efforts. A collaborative relationship exists when both sides view each other as partners, with both providing expertise and knowledge that will help the family reach its goals.

3.5.2 *Home-based services*

Parents have been encouraged to implement intervention activities at home. However, most of the time these home intervention activities are presumed to augment what parents typically did with their child rather than to modify the manner in which they should interact with their child. The focus has shifted to modify the manner in which they interacted with their children in order to ensure better development for their child.

Parent-child literature suggest that effective interactions are characterized by high responsiveness and moderate to low directiveness; while most early intervention services have tended to emphasize directive, child-focused instruction with domain-specific developmental and functional goals serving as primary teaching targets (McBride & Peterson, 1997:212).

Recently, a shift in focus has been noticed, where most early intervention services aim at allowing more “relationship-focus” and in contrast more parent involvement and responsiveness to the child's interactions, in order to allow for more progress and benefit to the child from the intervention service (Mahoney, et.al., 1998:7).

As early intervention programs continue to strive toward becoming more family-centred, home visiting is being used increasingly as a strategy for providing services to young children and their families, with the primary goal of allowing better accessibility of services to the families. A major function of home visits is to assist families to coordinate and integrate activities and services to the best benefits of the child and his family (McBride & Peterson, 1997:223).

Home visiting is a major component in comprehensive interventions designed to provide a range of services for young children and their families (Powell, 1993:25). The home is the place where the initial observation and assessment of a child's behavior and development usually occurs and is done by the parents. Therefore, the home is the place where more ecologically valid assessment of family concerns takes place; it is where a degree of flexibility and increased options for the family's choice in the location of the intervention service should be.

The home visitor serves a unique role in developing a close bond with the family to help identify and support the needs of the family. Home visits are a necessary but not sufficient component of the strategy to strengthen families. The efforts of home visiting programs must be considered in conjunction with what parents actually want from the agencies providing the services.

Home-based programs provide better services to enhance the child's development and involve the family more than centre-based programs. These programs commonly foster parenting skills, provide psychological supports to parents, focus on developmentally appropriate programs for the child and seek to enhance the child's developmental abilities and needs. Learning about parents' perception of home visits helps in planning and

providing the proper goals for both the child and his family. Staff in these programs base the nature, delivery, and scope of intervention upon activities of daily living such as bathing, feeding, etc. (Powell, 1993:27)

Intervention therefore may include all family members who want to be involved. While the level of intensity and range of services usually matches the level of need identified by the family. Staff should also base their communication with family members upon principles of mutual respect, caring and sensitivity, to again match the needs of the family.

Daro (1995:46-48) has reported that home visiting has increased nationally in the USA for families with impaired infants from 7% in 1992 to 15% in 1995. Roberts, Behl, and Akers (1996:304) reported in a study on early intervention and home visits that parents pointed to three primary factors that may prevent families from accessing the system: 1) families are not familiar with what services exist. 2) families are not aware of what services they need. 3) some families do not understand the full benefit of home visits.

3.6 *The needs of the child and the family*

Since parents influence their child's development, the effectiveness of the intervention depends on the actual interactions and responsiveness of the parents to their child's actions, and also the understanding of the needs of the child. The aim thus, is to offer the exceptional child and his/her family guidance and support that matches up to both the child's and family's needs, and not necessarily the intensity or frequency of the intervention services offered. One of the dilemmas related to providing " *family-needs-driven* " early intervention services is how to determine what actually constitutes needs.

Generally, needs are assumed to be caused by parents lacking the information and support necessary for raising a special needs child. In practice, needs are determined by asking parents what services they would

like to receive to help them cope and adjust with their new situation. Therefore, service providers must refrain from forcing their opinions and suggestions upon families and should recognize that parent's failure to communicate their needs may not indicate a lack of actual need for help and service (Roberts, Behl, Akers, 1996:306).

The pattern of relationships between family characteristics and the family's needs for services suggest that families with optimal patterns of family functioning usually receive better services than families with dysfunction. In a study by Mahoney and Filer, (1996:453-455) the type and scope of services provided to families participating in early intervention services was assessed to see if these services were responsive to the families' needs and concerns. Results indicated that: 1) the services received by the family correlated with their rating of the desirability for the service. 2) the services were more favorable in home-based and centre-based programs with home-based components than in centre-based services only. 3) the family's needs for services were higher than the level of services currently received. Which indicates that the family's needs and goals for their child should be viewed and considered carefully by the professional from the parent's point of view.

The critical determinant of intervention effectiveness may not just be that parents are involved, or the focus is on family needs, but rather that parents are supported to interact positively with their child's needs and abilities to ensure his/her developmental progress. Currently, there is little dispute that support for families is an essential component of an early intervention service program (Gallagher, 1990:544).

This was supported by the results in a study done by Mahoney, et.al. (1998:15) where it was reported that: 1) intervention effects on child development did not appear to occur unless mothers received support and encouragement to interact with their child; 2) that the mother modified her style of interaction to match the needs of her child; 3) and that the features of interactive style associated with the child's needs focused on directive teaching contributed to intervention effectiveness.

3.7 *The importance of integration and coordination of services*

Plans for the development of early intervention services provided under Part-H legislation PL102-119, which is the law responsible for implementation of early intervention services for infants and toddlers, incorporated a strong emphasis on developing integrated interagency systems and coordination at the family level to ensure that services for each child and his family are offered through an Individualized Family Service Plan (IFSP). Coordination is encouraged to ensure appropriate, non-duplicative services to children and parents in order to enhance child and family outcomes.

Because families have diverse needs and may receive services from a variety of private and public agencies offering services, the need to coordinate services between the family and systems level becomes critical. The integration of services, policies, and practices offered by community-based agencies becomes imperative if families are to receive effective, efficient, non-duplicative, and appropriate services in the community (Roberts, Behl, & Akers, 1996:308).

The goals of service integration are to be more efficient in providing coordinated services to the child and his family, and also better outcomes from children. Service integration should be *interactive and synergistic*, rather than *orthogonal*. This observation reflects an emerging view that integration of services is a process in which a number of strategies are used to facilitate the development of systems that work for both families and providers for the sake of the child (Dinnebeil, Hale, & Rule, 1996:323-324).

3.8 *The relevance of developmentally appropriate practices in early childhood services*

Developmentally appropriate practices (DAP) have become central in early intervention service programs. Developmentally appropriate practices refers

to educational methods that promote children's self-initiated learning where emphasis is placed on individualization of services in response to children's characteristics, preferences, interests, abilities, and curricula that are unbiased around issues of disability (Bredekamp, 1987:27).

Developmentally appropriate practices are used to design an age-appropriate, stimulating environment supportive of all children's needs. But they were not developed to reflect the specific individual needs of exceptional children, or the strategies needed to serve them. Early childhood special education practices, on the other hand, emphasize individualized strategies to maximize exceptional children's learning opportunities. (Udell, Peters, & Templeman, 1998:45).

In her study Novick (1993:405) looked at activity-based intervention (ABI) and developmentally appropriate practice (DAP) in comparison with early childhood special education (ECSE). Activity-based intervention stresses the philosophies of Piaget and Dewey, which stresses an integrated holistic approach with the emphasis on interdependence and mutual influence of interactive systems. While developmentally appropriate practice stresses the philosophies of Watson and Skinner, where behavior is viewed as a defined and measured product to be produced by the manipulation of antecedents and consequences. Simply stated, the comparison between developmentally appropriate practice and early childhood special education is quite clear, process versus product, wholes versus parts, meaning versus skills, complexity versus simplicity, fussy-minded versus accountability (Udell, Peters, & Templeman, 1998:48).

Activity based intervention is a combination of selected strategies in early childhood and behavioral analytical approaches, and relies on three main themes: 1) the influence and interaction of both the immediate and larger social-cultural environment of the child. 2) the need for active involvement by the learner. 3) the enhancement of learning by engaging the child in functional and meaningful activities. (Bricker & Cripe, 1992:23).

Bricker and Cripe (1992:23) defined activity-based interventions as: " a *child-directed, transactional approach that embeds intervention on the child's individual goals and objectives in routine, planned, or child-initiated activities, and uses logically occurring antecedents and consequences to help develop functional and generative skills* ".

Using both activity-based interventions and developmentally appropriate practices is helpful for implementing early intervention programs, because by combining both these approaches all major areas of the child's development may be covered. Udell, Peters, & Templeman (1998:49) mentioned that research about developmentally appropriate practices and early childhood special education signifies the importance of combining and blending both approaches, to ensure better quality services provided for exceptional children enrolled in early intervention or preschool programs.

The experiences infants and children have, influence their learning and development. Which indicates that children's development is not solely biological but is also the result of interactions between a growing maturing child and the changing environment. Learning enduces development in infants and children, which is actually influenced by their former experiences. Thus, the totality of children's experiences within and outside of the intervention program actually may influence how they develop and learn. Adults in the infant/child's immediate environment can provide and/or hinder experiences that promote or impede the exceptional child's development and learning (Udell, Peters, & Templeman 1998:46-47).

While learning is regarded as a process according to developmentally appropriate practice, learning should not be separated from the context in which it occurs, but should involve *authentic activities* that reflect the reality and demands of the daily living environment. The role of the interventionist in this approach is to arrange the environment in order to capitalize on the child's motivation to explore, initiate, and master his environment.

Gullo (1992:102) mentioned that interventionists in an early intervention program are encouraged to observe children at play, to determine their interest and abilities, and to facilitate the design of age appropriate activities in which each child can participate at his/her developmental level. The importance of varying activities and materials, and increasing its complexity as the child progresses, is an influencing factor on activity based interventions.

The parents of an exceptional child have a pivotal role in the decision-making process and participation in the planning of their child's service program. Therefore, they have a lot of influence on any activity based intervention suggested for their child. The parents guide the content of assessment and intervention so that services are individualized according to the family's needs, priorities, values, beliefs, preferred activities, and culture (Slentz & Bricker ,1992:16).

A thorough understanding of the child's needs by interventionists and parents, combined with creativity and willingness to have fun may result in the development of activities that can be used to target a variety of different skills. This can also help in providing developmentally appropriate services for the child in the most appropriate special education set-up, suitable to the child's specific and individualized needs.

3.9 *Variables affecting the child's development*

Some early intervention services aim at providing the least restrictive environment with the most adequate and individualized setting and also aims at providing developmentally appropriate approaches for the child to grow and develop in. They also encourage parental involvement. The nature and amount of family support that parents receive appears to lessen the stress associated with some of these variables and the raising of a child with an impairment. High levels of stress have been associated with a number of

factors such as low socioeconomic status (SES), limited or no spouse support, and poverty (Dunst, Trivette, & Cross 1986; Beckman, 1983). Even though parents of a child with an impairment are likely to experience a greater number of stressful events compared to families without an impaired family member, these stresses do not typically result in family dysfunction.

The assumption behind attempts to reduce parental stress while at the same time encouraging parental involvement in early intervention requires more careful examination within the context of diversity of families. For some families, stress provides motivation for actively pursuing interventions for infants with problems and impairments; while for others it reduces motivation.

In a study by Brinker, Baxter, and Frazier (1992:115), maternal stress was related to the development of infants with handicaps. The added stress required parents to take actions that both maintain their sense of control of the situation and help provide them with resources that impact positively on their child's development.

There are many important variables that may effect and influence the needs and involvement of the parents of the exceptional child, and therefore effects the progress and development of the child. Some of these variables are: *socioeconomic status, the child's impairment, religious/moral beliefs, cultural/social influences, and time.* (Brinker, Baxter & Frazier 1992, DeGangi 1994, Bella & Mahoney 1998, Dyson, 1991, Danesco 1997 McLinden, 1990). In the following section some of these variables are discussed.

3.9.1 Socio-economic status

Socio-economic-status (SES) implies the living conditions under which the family is living. Brinker, Baxter, and Frazier (1992:48) stated that the socioeconomic status of the family modulates the effects of stress on the family of an impaired child and their participation in early intervention programs, therefore influencing the subsequent development of their child. It appears that stress reduction was associated with the participation in early

intervention programs for most of the families. Most interventionists will proceed with goals to maximize the child's development while at the same time reducing parental stress, but also keeping in mind the causes of the parent's reactions as well as their needs.

Results from a study done by Lowitzer (1989:6) found that families from low socio-economic status groups tended to be disengaged in terms of their coping skills, while families from higher income groups tended to be enmeshed and very close-knit. Also these low-income families had fewer sources and resources for support to them, which added to the stress of their status. Data also suggested that the expected levels of parental involvement should take into consideration the family's economic and social status.

Professionals need to spend more time with families from cultural backgrounds other than their own, in order to try and understand the family's needs, customs and concerns so that they can relate better and cooperate together to help the exceptional child and the family's needs. In a study by DeGangi (1994:517) professionals found that families from lower socioeconomic and educational backgrounds were often concerned more with survival needs for the family than their disabled child's developmental needs. Also, when the professionals spent more time with the families their understanding of the family's concerns were more realistic, and they could help the parents set their priorities in order to help their special needs child.

3.9.2 The child's impairment

The child's impairment is viewed as a unique stressor which is likely to effect the psychological status of family members and patterns of the family functioning (Frey, et.al., 1989:241). At least two findings have been reported that appear to differentiate the attitudes and concerns of parents and families of children with impairments: 1) the care-giving demands associated with the child's disability are substantially greater than those associated with non-disabled children. This is reflected both by the care-giving time needed for these children and by the reported difficulty of child-rearing tasks. 2) parents

experience lots of stress in raising a young child with a disability (Erickson & Upshur, 1989:252; Harris & McHale, 1989:233; Bella & Mahoney, 1998:93).

Parental stress appears to be associated with factors such as: 1) the lack of knowledge and understanding about child's condition, 2) uncertainty and disappointment about their child's future; 3) the physical restrictions associated with attending to the needs of their child; 4) and the care-giving demands required by the child (Dyson, 1991:625; Kazak & Marvin, 1984:67)

In a study by Harris and McHale (1989:238) stress on families' functioning was observed. The first finding was that parents of children with impairments display greater signs of depression or psychological symptoms than do parents of non-disabled children. The second finding was that parents of children with impairments have more family and marital problems than those reported by families of non-impaired children.

3.9.3 Moral and religious beliefs

Dyson (1991:128) reported that most familial environments among families of children with or without impairments were comparable, with the exception that families of disabled children usually have a stronger moral-religious orientation and tended to be more achievement oriented. Some families of special needs children strive harder to adapt to their child's needs, and base their achievement and strength on the bases of moral and religious beliefs. The moral support that members of a family with a special needs child give to one another is usually a major contributor to family adjustment. The majority of the families adapt and adjust to their situation by developing a strong moral-religious orientation.

Dyson (1991:129) also reported that religious parents of children with impairments are more family oriented and see their children as an opportunity to show their strength and beliefs in God's will, rather than a burden on their lives.

In the Arab culture, religious and moral beliefs play a major role on the issue of parent's acceptance of their child's impairment. The belief that the Almighty Allah's wishes and commands are placed upon the parent as a test of their level of tolerance and patience to a problem, is something that is unnegotiable. Most parents see their child's impairment as Allah's will. And therefore, accept the situation and try to live with it, adapt to it, and make the best out of it. Some family's adaptation shows a pattern in which the child with an impairment is seen as bringing religious meaning into the lives of the family. This religious interpretation may enhance family relationships, thus enabling the family to cope more effectively with the stresses associated with raising their special needs child. Other families see their child's impairment as a test from Allah and therefore consider their child's impairment an opportunity to prove their strength to The Almighty Allah.

Beliefs about the nature and causes of childhood impairment provide the context for beliefs about treatment and intervention. In a study by Danesco (1997:49) parental beliefs and childhood impairment among various cultural groups were examined within an ecological framework. Parental beliefs seem to provide a medium by which culture effects child development. The major points that emerged from this study, and others similar, were that parents' beliefs about the nature and causes of childhood impairment reflected both biomedical and socio-cultural views. Parents' beliefs on the nature and cause of the impairment provide the context for beliefs about treatment, intervention or even seeking any form of advice and support. Therefore, professional interventionists should provide families with support and services that are responsive to their moral-religious beliefs and needs.

3.9.4 Cultural and social influences

The ethnic validity model proposed by Tyler, Brome, and Williams (1991) developed in the context of the psychotherapeutic relationship between therapists and clients from different cultural backgrounds, offered a useful framework towards differing beliefs between parents and professionals. Which suggests that the congruent, divergent, and conflicting interactions among

persons from different cultural groups are due to particular conceptions of the self, self-world relationships, and ideals of psychological well-being, with each cultural group having legitimate or ethnically valid world views.

Identifying the specific areas where professional's beliefs are convergent, divergent, and in conflict with the beliefs of parents is an initial step towards clarifying and enhancing parent-professional interactions. In an article by Harry (1992:335) focus was on developing some cultural dimensions to the fact that professionals should work toward helping families draw on their own unique resources. Professionals working with families from different cultural backgrounds, cultural self-awareness is a prerequisite to developing collaborative relationships with these families. Learning about the different cultural diversities of the families helps the professional in trying to understand, relate to, and accommodate the needs of the families of exceptional children.

The family stress theory views the operation and functioning of families as resulting from the complex interactions of external influences and the unique characteristics of individual family members. Hence, simply aiming to "correct" parents' beliefs toward a more biomedical-oriented perspective is neither a morally responsible course nor a pragmatic and realistic objective. Rather it is very impractical and subjective (Dyson, 1991:630).

Also, mere acceptance of parents' socio-cultural views and practices is untenable. Therefore a negotiation of specific practices and beliefs between parents and professionals with the agreement of mutually shared goals for the development of the child promises a better outcome for both sides in general and for the child in particular.

3.9.5 *Time*

Time is a very crucial factor that influences the parents and family's involvement with their special needs child. Time is also considered a very critical factor that influences the outcome of early intervention services.

Families that have children with impairments have many changing demands that influence their effective use of time (McLinden, 1990:252).

Studies have found that parents of children with impairments experience intense demands related to a variety of care-taking responsibilities (Beckman, 1991:152 McLinden, 1990:258). The amount of '*demanded-time*' was the stress mentioned most frequently by those parents. Determination of how families allocate and use time to interact with their special needs child is not entirely in the family's hands. It is also a matter of how professionals work with the families to increase their efficient and effective use of time.

In summary, while some parents think of time spent with their special needs child as a daily routine, others see the care of their child as an ongoing, life-long, ever-evolving commitment not a short-term education or therapeutic contact. This is why collaboration, and cooperation as well as understanding the needs of the family by the service provider, is very crucial in establishing effective and efficient use of time.

3.10 *Choosing the right intervention method*

In order to provide the most appropriate services for the child and his family, the intervention method should allow for maximum participation in the '*mainstream*'. Despite the limitation an impairment might place on a child and family's ability to lead an ordinary existence, good services promote the potential for "normal" rather than "rigid" routine. The intervention method should focus upon activities of daily living, providing fun environments that stimulate children's initiations, choice and engagement with focus on the social surroundings, in the next to least restrictive environment (Bredekamp, 1993:260-263).

Service delivery models consist of the overall pattern and location of interventions for young children with impairments and their families. The recommended practice indicators for service delivery models are organized in any of the following settings: homes, centres, hospitals, and clinics.

As mentioned earlier in chapter two, early childhood special education indicates that in order to provide an appropriate learning environment for very young children, it is better to combine between using the developmentally appropriate practices guidelines and the early childhood special education recommended practices (Udell, Peters, & Templeman, 1998:44).

The above mentioned practices have specific guidelines, which were discussed in an article by Udell, Peters, and Templeman, (1998:45-46). The guidelines for developmentally appropriate practices focus on three main dimensions: 1) age appropriateness. 2) individual appropriateness. 3) cultural appropriateness. The guidelines stated by the early childhood special education recommended practices emphasize the following areas. 1) functional goals. 2) monitoring children's progress towards these goals. 3) family-centred approach. 4) planning for transitions. 5) multidisciplinary services.

Other authors have written about and discussed both of the above mentioned practices. Carta, et.al. (1991:294) warned against the sole use of developmentally appropriate practices and the exclusion of effective common principles and practices in early childhood education. Bredekamp and Rosegrant (1992:106) stated that:

"...the guidelines are the context in which appropriate early education of children with special needs should occur; however, a program based on the guidelines alone is not likely to be sufficient for many children with special needs..."

3.11 Relevance of early intervention services

From the above comprehensive review of the current literature in this regard, it leaves no doubt that early intervention services are crucial and necessary for both the disabled child and his/her family. There has been a shift in the methods and techniques of how early intervention services are provided for exceptionally young children and their families. This shift coincides with the

change in the understanding and expectations of parents to their roles and rights. There is clearly a continuum from the clinically oriented professionally centred approach to the social developmental based family-centred approach.

In reviewing the evolvement in the formal participation of parents in therapeutic and educational programs for their disabled children, Erickson and Upshur, (1989:252-254) stated that a big transition has taken place. Regulation now mandates that family-focused services are implemented in early intervention programs instead of child-focused services. One of the suggested methods of helping achieve this approach is called "*backward mapping*". In this method parents are asked to explicitly identify the needed service in order to determine how to plan the service offered to the child and the family, rather than the professional planning first then testing the set plan or goals. This method was also discussed by Able-Boone, Sandall, Loughry, and Fredrick (1990:103). This emphasizes the relevance and importance of the family's input into the actual plan of service needed for their child from their point of view, but with the help and direction of professionals.

In a study by Summers, Dell' Oliver, Turnbull, Benson, Santelli, Campbell, and Siegal-Causey (1990:96) mothers of children with impairments were asked their views of their needs, expected outcomes of early intervention services, and qualitative characteristics of services they valued. Results showed that for these mothers the most important qualities were informality, emotional sensitivity to their needs, and friendship. Which means that *how* services are delivered is as important as *what* services are available for the exceptional child and his/her family.

Therefore, attention has shifted to the task of identifying the child's characteristics, abilities and needs; the family's characteristics and needs; and the available early intervention program features, and allowing these three important factors to interact to optimize the outcomes for the child and the family (Guralnick, 1997:5).

The actual means and strategies of providing services for the child and the family are a very important issue. Intervention strategies should minimize the extent to which disabled children are dependent upon other. Strategies should also promote active engagement and participation, initiation in choice making and self-directed behavior; and should be age-appropriate. Intervention strategies should be judged on their ability to cause rapid learning and use of important skills, to ensure the actual learning of new skills and feelings of success and mastery for both the child and his/her family.

Therefore, professional interventionists should not just be satisfied if exceptional children learn new skills, but should only be satisfied if these children actually use those new learned skills and be able to generalize them when and where ever they are appropriate and needed.

The overall review and research covered on the area of early intervention and parental involvement in raising a disabled child, resulted in a very rich data-base of crucial information done over the last 10 years in the Western part of the world. This gathered information on the topic of early intervention is crucial to the current study. From the review in chapter one of special education services offered to children with exceptionalities in the Kingdom of Saudi Arabia, it is apparent that the field of special education is fairly new. Also the available early intervention services are somewhat limited. Some of the governmental centres only provide services for exceptional children starting at the age of four, while most of these children do not receive services before the age of six years.

Exceptional children who are younger than four do not receive any kind of formal education or therapeutic services from these centres. Most families depend entirely on either the medical field for consultations and recommendations of what to do with their special needs child. They also depend on the few private centres that have been established to serve the different impairments (see appendix 5 for the listing of names and addresses of private centres for exceptional children in the Kingdom of Saudi Arabia).

The private centres offering services for exceptional children usually specialize in the services provided for the different impairments. This helps in providing quality service for the children and their families, and allows for control over the quality versus quantity of the provided services. Maintaining the qualification levels of the professional staff is also a very important factor in this process. Yet the centres offering early intervention services are limited.

In the city of Riyadh, which is the capital of the Kingdom of Saudi Arabia, there are only two centres that provide early intervention services for special needs infants and children, and three private schools that have special classes for special needs children under the age of four. In the city of Jeddah, there are only three centres that have early intervention programs, and two private schools that have special education set-ups for young special needs children (see appendix 5).

From the above mentioned data about the limited availability of early intervention programs in the Kingdom of Saudi Arabia, the current study aims at emphasizing the importance and significance of establishing early intervention programs in the Kingdom of Saudi Arabia. The study also aims at showing the significance of early intervention services for families of exceptional children in general, and for young children with intellectual and physical impairments in particular.

Linking factors influencing early childhood development with the components of early intervention programs will help in showing the effectiveness of early intervention services offered to the child and his/her family. This linkage can be accomplished by conceptualizing risk and disability status in terms of stress capable of adversely affecting the family's intervention patterns that govern the developmental outcomes of children.

Consequently, as useful as a review of the past decade or so of advances in the area of early intervention can be, it is also important to plan for future advancements and progress in early intervention service programs provided for special needs children and their families according to their needs and current trends.

CHAPTER 4

Empirical study: Methodology and Procedure

4.1 *Introduction*

In the preceding three chapters the literature review of some of the current research done on some of the issues revolving around the topics of special education, special needs children, the different impairments and early intervention was reviewed. The rationale and significance of performing the current study was also discussed. It seems quite evident that there is a great deal of significance in providing early intervention services for the families of special needs children. In the United States of America attention has shifted from *what* these services offer to the special needs child and his/her family to *how* these services can be provided. In the Kingdom of Saudi Arabia, the emphasis is mainly on stressing the importance of early intervention to both the special needs child and the family. Also the aim is to encourage families to be involved in such programs, and to establish how these services can be provided to suit the needs of special needs children and their families.

This shift has caused a change in focus for most early intervention programs. It is now important to firstly identify the needs of the child with special needs, abilities, and characteristics. Secondly, to identify the family's needs and characteristics. And thirdly, to identify the available early intervention services and their features, in order to allow these three factors to interact to optimize the outcomes for the child and the family (Darling & Baxter, 1996:167).

The data mentioned in chapters one and three about the currently available services for special needs children and early intervention programs in the Kingdom of Saudi Arabia, support the fact that early intervention services for young special needs children and their families are very limited. The present study aims at determining the significance of early intervention services for families of special need children with intellectual and physical impairment. The

study also aims to identify the need for establishing more early intervention centres, as well as effectively utilizing the services of the available centres, which try to meet the needs of the mothers and/or families of these special needs children.

This study was designed to identify the needs of mothers of children with intellectual and physical impairments and compare them with the actual services provided by some of the centres offering early intervention services. For the purpose of this study the Help Centre in Jeddah, in the Kingdom of Saudi Arabia, that offers services to intellectually impaired and children with physical disabilities had been selected.

The researcher formulated three different questionnaires for the purpose of collecting the data which will aid in answering the questions formulated for the study. One questionnaire was to collect data about the ***family's background information***. The second questionnaire for ***the mothers to express their needs*** in association with raising a child with an impairment in the family. And the third questionnaire was for ***service providers to help in explaining about the currently available early intervention services*** in the Kingdom of Saudi Arabia and the Gulf countries.

4.2 Selection of the set-up: design of the study

This study was conducted at "The Help Centre" in Jeddah, in the Kingdom of Saudi Arabia. It is a private non-profit organization owned and funded by a wealthy Saudi family. The centre was established in 1986. It is licensed and supervised by the Ministry of Health. Parents pay annual tuition fees for the services provided for their children. Some families of low socio-economic status receive grants, while other cases receive free services, depending on the case study reported by the social worker. The centre first started by offering services for children with intellectual impairments, mainly Down's Syndrome. The services were expanded by accepting children with physical impairments. The objectives of the centre are to encourage and train the

children to be independent; to encourage the children to communicate with their immediate environment; to help the children socialize and adapt to the environment.

The centre started offering services for only 3 children in 1986. The total number of children receiving services in the different programs in 1999 were 320 children. The total number of professionals providing the different types of services in 1986 were three therapists, and in 1999 the number of staff was 196 therapists. The centre offers many programs for the children depending on the child's age. These programs are:

- 1) The early intervention program - home-based services (0-3 years old)
- 2) The early intervention program - centre-based services (3-4 years old)
- 3) The preschool program (4-6 years old)
- 4) The day-care program (6-10 years old)
- 5) The prevocational program (10-16 years old)
- 6) The afternoon rehabilitation program
- 7) The White group for severe mentally and physically impaired children
- 8) The home care program (3-10 years old)

The researcher chose to conduct the study at the Help Centre, because it is the only centre in the western region of the Kingdom of Saudi Arabia that offers early intervention services. It is also the pioneer centre in the country that offers early intervention services for children with intellectual impairments and mild physical disabilities.

4.3 Selection of the sample

4.3.1 Population

The population of the study consisted of all mothers in the early intervention program at The Help Centre. The researcher sent the questionnaire for Early

Intervention Programs to all centres that provide special services for special needs children, to find out which centres provide early intervention services. However, it was found that The Help Centre is the only centre in the western region that provided this service. Therefore, the population of the study is restricted to the mothers of children with intellectual and physical impairment receiving early intervention services at The Help Centre.

A total of 35 mothers of children with physical impairment and children with intellectual impairment, mainly Down's Syndrome children was selected. But the size of the sample got reduced to 27 as three mothers chose not to participate for personal reasons, two mothers submitted incomplete questionnaires where their answers were only to some of the questions and not to all, and three mothers did not return questionnaires.

4.3.2 Sample

The actual sample in this study therefore consisted of 27 mothers of special needs children. The sample consisted of intellectually impaired, Down's Syndrome, physically impaired, and/or multiply impaired children. Of these children 15 are Down's Syndrome, 8 are physically impaired, and 4 are with multiple disorders of both physical and moderate intellectual impairment.

Table 4.1 shows the break down of the number of children in the sample according to their gender and their disability.

Table 4.1

THE BREAK DOWN OF THE NUMBER OF CHILDREN IN THE SAMPLE
ACCORDING TO THEIR GENDER AND IMPAIRED

Disorder	Boys	Girls	Total
Intellectually Impaired/ Down's Syndrome	10	5	15
Physically Impaired	5	3	8
Multiply Impaired	1	3	4
TOTAL	16	11	27

Most children enrolled in the early intervention program at The Help Centre start receiving services through a home-based program until they are approximately one and a half years old, after which they are enrolled in the centre-based program. The sample of mothers in this study has children ages ranging between one year to three and a half years of age. Eleven children from the sample were enrolled in the home-based program, while sixteen were enrolled in the centre-based program.

The eleven home-based children received twice a month sessions every other week. The early childhood specialist and sometimes either the speech therapist, the social worker, or the physiotherapist go on home visit depending on the need of the child and the family. The other sixteen children were enrolled in the centre-based program. They attended twice a week sessions of two hours length. They received group activities, individual treatment sessions (such as speech therapy, or physiotherapy), and daily living skills training (such as eating, toilet training, dressing/undressing, brushing teeth). Some sessions were planned for two children and their mothers to participate with the therapist or specialist. While their children were receiving a session some mothers received either individual or group counseling sessions with either the social worker or the early childhood specialist.

Each mother was encouraged to be involved with her child and to follow the instructions from the specialist during the sessions. A list of instructions from the child's Individualized Family Service Plan (IFSP) was given to each mother as a home program to be followed-up at home with the child.

4.4 Procedure of study: Instrumentation

4.4.1 The rational for questionnaire development

The questionnaire was the tool used in this study to collect data. Questionnaires are a structured method of gathering information from respondents in a research study. Questionnaires may be used in educational and sociological research to identify family priorities, give information about

available alternatives, and facilitate decision making in different situations. They are particularly useful for collecting factual and attitudinal information, and for ascertaining the preference of family members in relation to a range of alternatives (Darling & Baxter, 1996:161).

Questions in a questionnaire are the basic mechanism for gaining information. Some of the common characteristics of written questionnaires are that they seek more focused responses and usually require people to answer in one of the pre-structured categories made available for them to avoid or minimize bias. Also Questionnaires are usually less time consuming than interviews or observations (Darling & Baxter, 1996:164). Moreover, the mothers in the sample preferred the questionnaire to the interview as this afforded them anonymity and confidentiality. Questionnaires usually include many variables or items that are to be tested, checked, matched, or correlated. Variables therefore are measured in order to compile data, for achieving certain results that may then be interpreted and analyzed to emphasize or ascertain a specific issue.

The researcher in this study compiled the three different questionnaires to aid in answering to the stated problems and goals of the study. The accumulated data from the responses of the respondents to the three different questionnaires in this study will be reported through tables and graphs.

4.4.2 Questionnaire Design

Three different questionnaires were designed and used to gather relevant data that would facilitate the aim and objectives of this study. All three questionnaires were written in both Arabic and English. The Arabic questionnaires were distributed to the respondents. The English questionnaires are included as samples in the appendices of this study, as the study was reported in English. The three questionnaires were:

- 1) *The Questionnaire of Family's Background Information* (see appendix B)
- 2) *The Mother's Needs Questionnaire* (see appendix C)
- 3) *The Questionnaire for Early Intervention Programs* (see appendix D)

4.4.2.1 The Questionnaire of Family's Background Information

The objective of this questionnaire was to gather information from the families in the sample in order to know the family's background history and relevant data, that can help in understanding and relating the family's conditions to mothers' needs. The following steps were undertaken by the researcher to design the Questionnaire of Family's Background Information:

- 1) The researcher designed the questionnaire to include items that will help in gathering relevant information about the family's background.
- 2) The chosen items were listed randomly. The questionnaire was then given to three mothers to respond to in the pilot study. This process helped in verifying the reliability and accuracy of the responses.
- 3) The questionnaire consisted of 14 items as shown in the sample "Family's Background Information" questionnaire in appendix B. The items were:
 - *Marital status of the parents.*
 - *Mother's and father's age.*
 - *Number of siblings in the family.*
 - *Mother's and father's educational background.*
 - *Mother's and father's employment status.*
 - *Mother's and father's income/salary.*
 - *Other family members living with the family.*
 - *Type of residence.*
 - *Other impaired children/individuals in the family.*
 - *The initial identification of the child's impairment.*
- 4) Each of the above items on the questionnaire was included for specific reasons. The marital status is relevant in knowing whether the family was a complete unit sharing and caring for the needs and problems

together. Items such as the mother's and father's age, their educational background, their employment status, and the salary and income status helps in identifying the pressures and responsibilities the family was facing, and the financial resources available to them (Lee & Kahn, 1998; Arcia, Keyes, Gallagher, & Herrick, 1993; DeGangi, et al., 1994). Items such as the number of siblings in the family, other family members living with the family, the type of residence, other impaired children in the family, and the initial identification of the child's problem help in determining the pressures and shared responsibilities surrounding the family (Lowitzer, 1989; Tocci, McWilliam, Sideris, & Melton, 1997).

- 5) The information from the Family Background Information questionnaire was organized and analyzed in terms of the number of responses of the mothers in each category (frequencies), and also the relationship between the number of responses of the mothers in each category to the type and degree of need expressed. This information is presented in Table 5.14 and Table 5.15 respectively.

4.4.2.2 The Mother's Needs Questionnaire

As mentioned earlier, this questionnaire was formulated with the aim of identifying the needs of the mothers in the sample. The researcher followed the example of a similar survey that was administered in a study done by Darling in 1990. The original study focused on family needs as stated by parents rather than by professionals. The objective of the tool was to determine the magnitude and pattern of parent concerns in raising a disabled child. The original tool is called *The Parents Needs Survey* (Darling & Baxter, 1996:72).

The items listed in the Mother's Needs Questionnaire are broadly classified into five categories to help in comparing the needs of the mothers to the actual early intervention services provided by the different centres that have responded to the Questionnaire for Early Intervention Programs. Analysis of

the data will help identify the relationship between the degree of mothers' needs and the extent to which the services provided meet these needs.

The following steps were taken by the researcher to compile the Mother's Needs Questionnaire:

- 1) Discussions with some of the mothers at the centre prior to the formulation of the questionnaire helped in identifying some of the main areas of concern and need of the mothers in raising an impaired child. The items that were chosen from the original Parents Needs Survey for the Mothers' Needs Questionnaire were then listed with emphasis on the needs as defined by the mothers.
- 2) The items mentioned by these mothers were first set in a checklist format with no specific order, to help gather the relevant variables or items of needs for the mothers.
- 3) The researcher then formulated a questionnaire, which consisted of 29 items. This questionnaire was distributed to the same three mothers who were randomly selected for the pilot study. On the basis of their responses to the pilot study of the Mothers' Needs Questionnaire, six items were eliminated from the original questionnaire for irrelevance and inaccuracy. Items number 5, 12, 13, 14, 21 had to be reworded.
- 4) The final Mothers' Needs Questionnaire, which emerged after the pilot study, consisted of 23 items. A '3-point ordinal scale' was established to help show the degree of need for each item, which ranged from: *severe need, moderate need, no need* (see appendix C).
- 5) The Mothers' Needs Questionnaire had five main categories which were:
 - Information about diagnosis, prognosis, and treatment
 - Type of intervention for child/family
 - Professional support from agency/centre

- Social support from family/friend
 - Materialistic support for the family
- 6) The responses for each item are expressed in terms of frequencies and their corresponding percentage values. The degree of need expressed for each type of need (item) is presented in a table and also shown graphically.

4.4.2.3 The Questionnaire for Early Intervention Programs

The sample of centres that were selected for review of their services was 10, which includes The Help Centre where the study was conducted. The objective of this questionnaire is to obtain both general and specific information about the types of early intervention services offered by the different centres in the Kingdom of Saudi Arabia and the Gulf.

The services provided for the child and the family through the early intervention program was to be compared with the actual needs stated by the sample of mothers in the current study, as found from the Mothers' Needs Questionnaire.

The results of the data collected from the Questionnaire for Early Intervention Programs will be presented and discussed in the next chapter of this study to identify the relationship between the services offered by these centres and the needs mentioned by the sample mothers in this study. Details of information of the different centres that are offering early intervention services in the Kingdom of Saudi Arabia and the Gulf, who responded to the Questionnaire for Early Intervention Programs, is listed in Appendix A.

The following steps were taken by the researcher to design the Questionnaire for Early Intervention Programs (see appendix D):

- 1) The United Nations Children's Education Fund (UNICEF) office in Beirut - Lebanon was contacted by the researcher to get a list of all the centres in the Gulf Region offering early intervention services. Out of the eleven centres given in the list, only five were in the Gulf Region.
- 2) The researcher compiled a questionnaire called: "Questionnaire for Early Intervention Program". The questionnaire was faxed with the introduction letter to only the five centres in the Gulf Region. Directors of these centres were asked to answer all the sections of the questionnaire. The questionnaire consisted of four main sections which included the following:
 - (i). General information about the centre: (type of centre, age of children, type of disability, objective of service, means of providing the service).
 - (ii). Specific information about the services: (type of service, style of service, period of service, technique of service).
 - (iii). Description of rehabilitation team: (type of team members, team approach to applying the service).
 - (iv). Means of communication with family: (monthly reports, written documentation, phone calls, individual educational plans, meetings with family at centre, meetings with family at school, meetings with family at home, individual family service plan).
- 3) Response from three centres was received within two weeks; two centres responded after one month; while the remaining centres needed frequent reminders. All ten centres had returned the checklists with their complete responses within a two month period.
- 4) One centre in Bahrain forwarded the questionnaire to two other centres that were not on the original list, but were helpful in providing information.

- 5) The researcher then gathered the data collected from the different questionnaires returned from the centres and organized it into a List of Centres offering Early Intervention Services in the Kingdom of Saudi Arabia and the Gulf (see appendix A).

4.4.4.4 Procedures for establishing validity and reliability of the questionnaire

4.4.4.4.1 Validity and reliability for the Family Background Information questionnaire

For construct and face validity the researcher asked mother about relevant information of the family background. For reliability procedures the researcher did a pilot study where the chosen items were listed randomly. The questionnaire was then given to three mothers to respond to in the pilot study. This process helped in verifying the reliability and accuracy of the responses. Minor changes in the wording of items 1,7,8,9,10 in the Questionnaire of Family's Background Information were made (see appendix B).

4.4.4.4.2 Validity and reliability for the Mothers' Needs Questionnaire

For construct and face validity the researcher used the survey done by Darling in 1990 (Darling & Baxter, 1996:72). The researcher followed the example of this study. However, more emphasis was placed on the mothers' needs. The logic being that in the Saudi culture mothers are usually the primary care takers in raising their children and responding to their primary needs. The researcher also made minor changes and adaptations to some of the items on the original survey to suit the cultural aspects of the Saudi culture, after the written consent from the author. The researcher designed a preliminary draft of the Mother's Needs Questionnaire based on this initial information.

A pilot study was then performed in which the questionnaire was randomly administered to three mothers. This pilot study helped test the clarity and accuracy of the listed items in the questionnaires for validity and reliability

before the actual study was conducted. Items number 5,12,13,14,21 in the Mother's Need Questionnaire also had to be reworded for better understanding (see appendix C). The final draft of the questionnaire was a result of the pilot study, which also served the purpose of establishing reliability and validity.

While the issue of reliability was established by ensuring that the three mothers in the pilot study understood the items in the questionnaires as intended by the researcher, the issue of validity did not arise as the concept of need as used in the study is expressed in terms of items having face validity. Moreover, the Mother's Needs Questionnaire was taken and adapted from the Parents Need survey designed by Darling (1990).

4.4.4.4.3 Validity and reliability for the Early Intervention Programs questionnaire

For construct and face validity, the researcher designed and selected the items on the questionnaire to help gain both general and specific information about the services offered by the different centres. The formulated questionnaire was reviewed by the director of The Help Centre to comment on the accuracy and relevance of the items. Minor changes were recommended to the second section of the questionnaire about the specific information about the centres.

4.5 *Implementation of the study*

The researcher collaborated with The Help Centre to implement the current study with the mothers and their children receiving early intervention services. After written approval was received from the centre, a meeting was set with the director of the early intervention program to discuss and plan the steps and process of implementing the practical part of the study. A total of thirty-five mothers' of children with intellectual and physical impairments were chosen as the sample for the study. The mothers were given a general

briefing about the importance and relevance of the study, and were encouraged to participate with interest and involvement. The importance of the mothers' support and cooperation was also emphasized.

4.6 *Statistics and Data Analysis*

The current study is a descriptive and explanatory study. Being that the size of the sample is small, the statistical treatment of the data will be primarily qualitative. The number of frequencies and their corresponding percentage values will be used to compare between the needs. Firstly a comparison will be between the degree of the various needs. Secondly, a comparison will be done to identify the extent to which these needs are influenced by the socio-economic variables of the family's background. Finally, a comparison between the degree of the needs expressed by the mothers and the currently available early intervention services will be examined.

All the data will be presented as a whole as well as individually in tables and graphs to understand the trend of the results. The researcher used the Excel Program on the computer to get numerical data, which will assist in acquiring the results. Statistical values included mean numbers, percentages, degrees, averages, and frequencies. The collected numerical data were entered as descriptive statistics into tables and graphs to report demographic information and answer to the formulated research questions.

The items on the Mothers' Needs Questionnaire were grouped in the following categories to help in analyzing the data gathered from the sample. Also to help in identifying the degree of need for each item, and the relationships between the average degree of the needs among the categories.

- Category (I): *Information about diagnosis, prognosis and treatment.*
Items: 1,2,3,12,14
- Category (II): *Type of intervention for child/family .Items: 4,5,10,16*

• Category (III): *Professional support from agency/centre.*

Items: 6,7,8,17,19,21,23

• Category (IV): *Social support from family/friend. Items: 9,11,13,18,20*

• Category (V): *Materialistic support for the family. Items: 15,22*

In the following chapter, data gathered from the different questionnaires will be compiled and presented in tables and graphs. Results from the formulated tables and graphs will then be analyzed and interpreted to help answer to the questions formulated for the study.

CHAPTER 5

Empirical Study: Results and Interpretations

5.1 Reporting of results

In this chapter the responses gathered from the different questionnaires used in the study were analyzed, and the results were interpreted to show the significance and relevance of the gathered data to the goals of the study. As mentioned in chapter 1, three questionnaires were designed to help in gathering the relevant data that would facilitate the aim and objectives of the study, and answer to the questions formulated in this study. These questionnaires were:

- 1) The Questionnaire of Family's Background Information
- 2) The Mother's Needs Questionnaire
- 3) The Questionnaire for Early Intervention Programs

The data gathered from these three questionnaires are presented in two sections. First the results from the Questionnaire of Family's Background Information were analyzed and interpreted to identify the relevant socio-economic situation of the families. Then the results from the Mother's Needs Questionnaire were analyzed and interpreted, to identify the needs relevant to the mothers. The socio-economic background of the mothers and their expressed needs, were compared to identify the relationship between the categories of needs and the socio-economic background of the mothers. Lastly, the results from the Early Intervention Services questionnaire were discussed.

5.1.1 The Questionnaire of Family's Background Information

As mentioned in chapter 4 of this study, the objective of the Questionnaire of Family's Background Information was to gather information about the families in the sample, in order to better understand their conditions and needs. This

questionnaire consisted of 14 items (as shown in the sample “Questionnaire of Family's Background Information” in appendix B). The data collected from each of the 14 items in this questionnaire was presented in tables and graphs in order to report the frequencies, and percentages of responses and their distribution over the various variables studied. The percentage signifies the ratio of subjects' responses to the item when compared to the total number of subjects in the sample.

Data collected from this questionnaire is presented in two main tables. Table 5.12 presents the relationship between the most relevant socio-economic background information of the mothers and the categories of need. Table 5.13 presents the relationship between the remaining socio-economic background information that were gathered from the questionnaire, and which were of less immediate significance to the categories of need.

Table 5.1

Item 1: Distribution of marital status

Marital status	No. of Subjects	%
Married	27	100%
Divorced	0	0%
Widowed	0	0%
Total	27	100%

Table 5.1 describes (Item 1) *the marital status* . The marital status is shown under three groupings (*married, divorced, and widowed*). As shown in the table, all mothers in the sample were married.

Graph 5.1

Item 1: Distribution of marital status

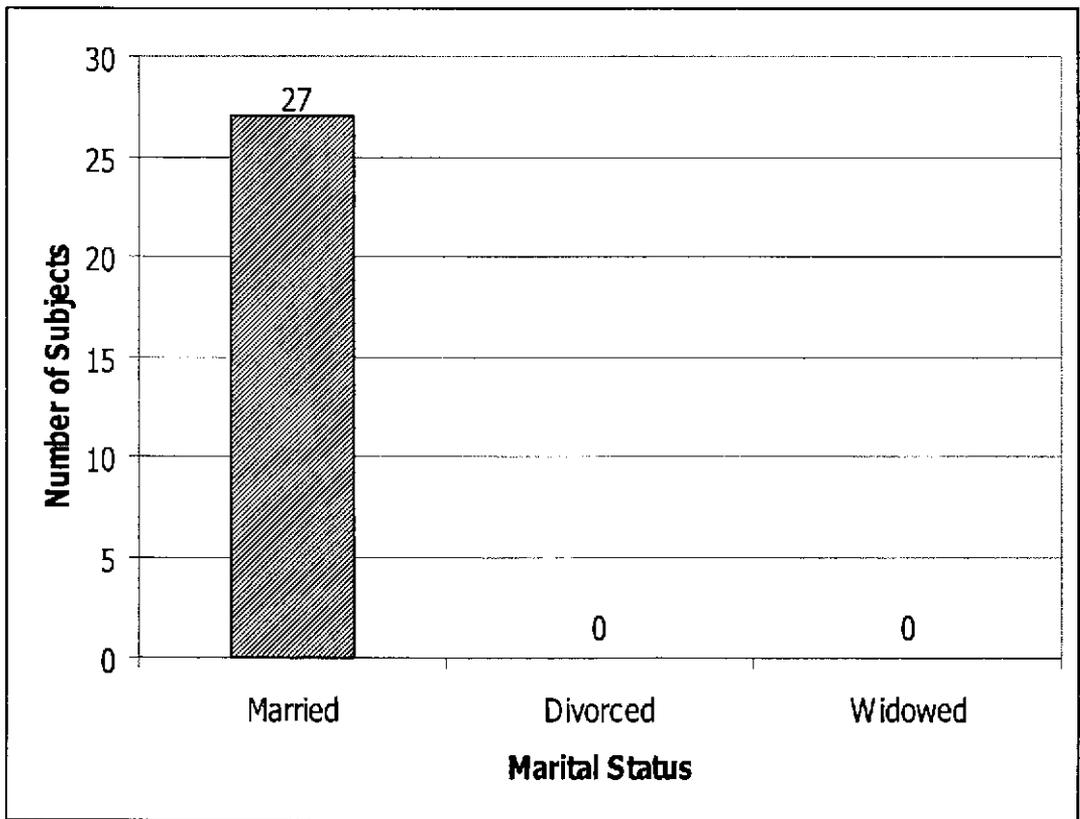


Table 5.2

Item 2: Distribution of mothers' age

Mothers' Age	No. of Mothers	%
18-25	3	11%
26-35	11	41%
Above 35	13	48%
Total	27	100%

Table 5.2 describes (Item 2) *the mother's age*. The mother's age is grouped under three groupings (*18-25 years, 25-35years, above 35 years*). As shown in the table, 11% of the mothers is in the (18-25 years) group. 41% are in the (25-35 years) group. And 48% are in the (above-35 years) group. Results indicate that most of mothers are above 35 years of age.

Graph 5.2

Item 2: Distribution of mothers' age

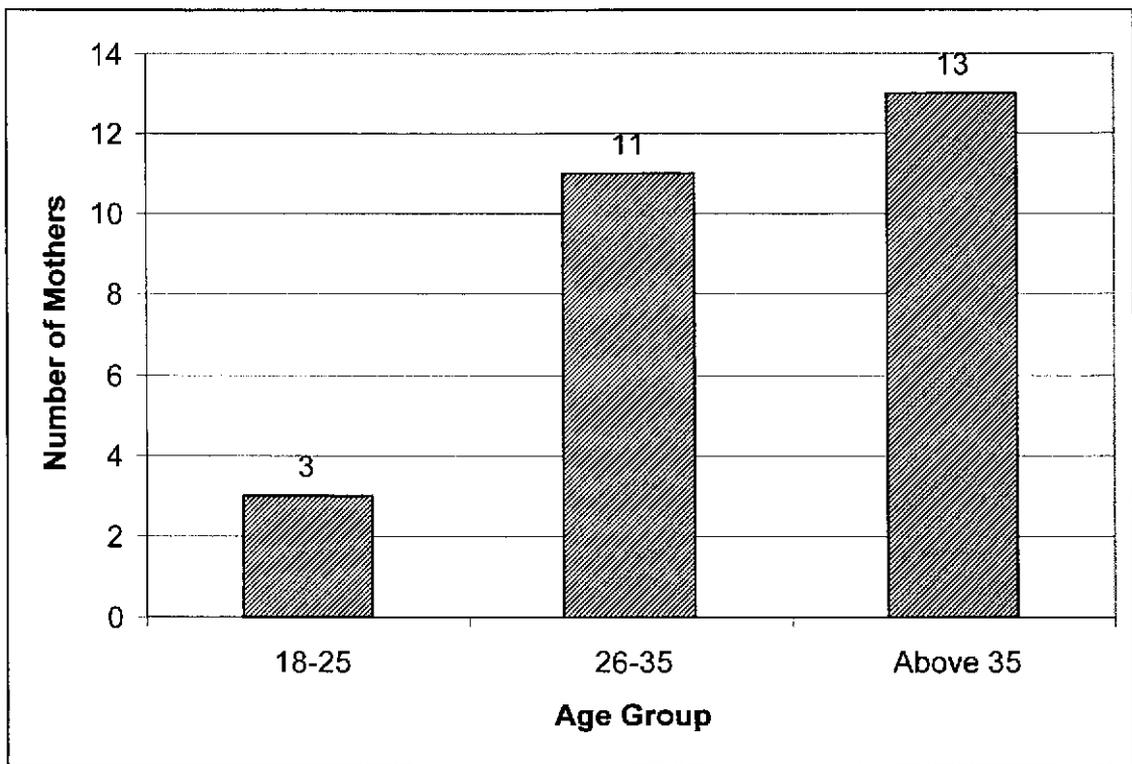


Table 5.3

Item 3: Distribution of fathers' age

Fathers' Age	No. of Fathers	%
20-30	2	7%
31-40	11	41%
Above 40	14	52%
Total	27	100%

Table 5.3 describes (Item 3) *the father's age*. The father's age is grouped under three groupings (*20-30 years, 30-40 years, above 40 years*). As shown in the table, 7% of the sample is in the (20-30 years) group. 41% are in the (31-40 years) group. And 52% are in the (above-40 years) group. Results indicate that most fathers are above-40 years of age.

Graph 5.3

Item 3: Distribution of fathers' age

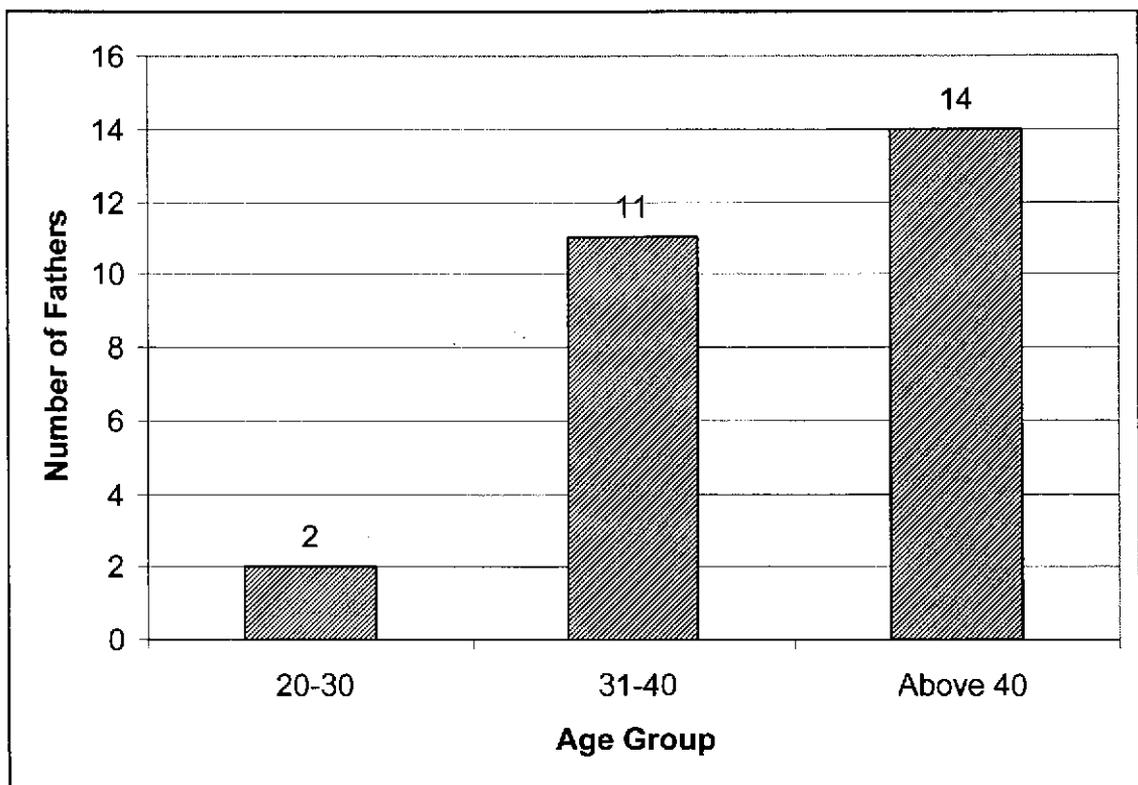


Table 5.4

Item 4: Number of siblings in the family

Number of siblings	No. of Families	%
1	3	11%
2	3	11%
3	3	11%
4	4	15%
5	6	22%
More than 5	8	30%
Total	27	100%

Table 5.4 describes (Item 4) *the number of siblings in the family*. As shown in the table, 11% of the sample families have one sibling, 11% have two siblings, 11% have three siblings, 15% have four siblings, 22% have five siblings, and 30% have more than five siblings. Results indicate that the majority of families in the sample have more than six children.

Graph 5.4

Item 4: Number of siblings in the family

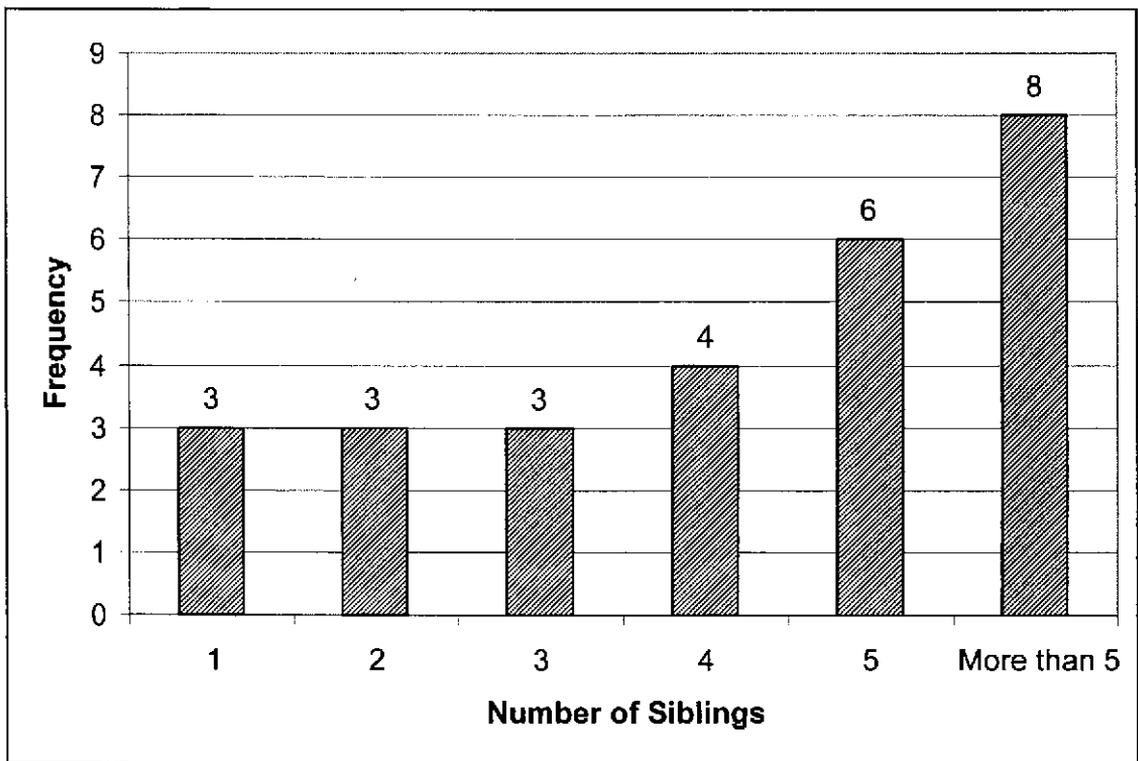


Table 5.5

Item 5 & 6: Fathers' and mothers' educational level

Educational Level	Father	%	Mother	%
Graduate	4	15%	2	7%
Undergraduate	9	34%	5	19%
High school	12	44%	12	44%
Intermediate	0	0%	3	11%
Illiterate	2	7%	5	19%
Total	27	100%	27	100%

Table 5.5 describes (Item 5 & 6) both *fathers' and mothers' educational levels*. The educational level was categorized in five levels (*undergraduate, graduate, high school, intermediate school, & illiterate*). As shown in the table 34% of fathers and 19% of mothers have undergraduate education. 15% of fathers and 7% of mothers have a graduate degree. An equal number of 44% of fathers and mothers have high school education. 11% of mothers have intermediate education. 7% of fathers and 19% of mothers are illiterate. Results indicate that the majority of fathers and mothers in the sample had high school education and above.

Graph 5.5

Item 5 & 6: Fathers' and mothers' educational level

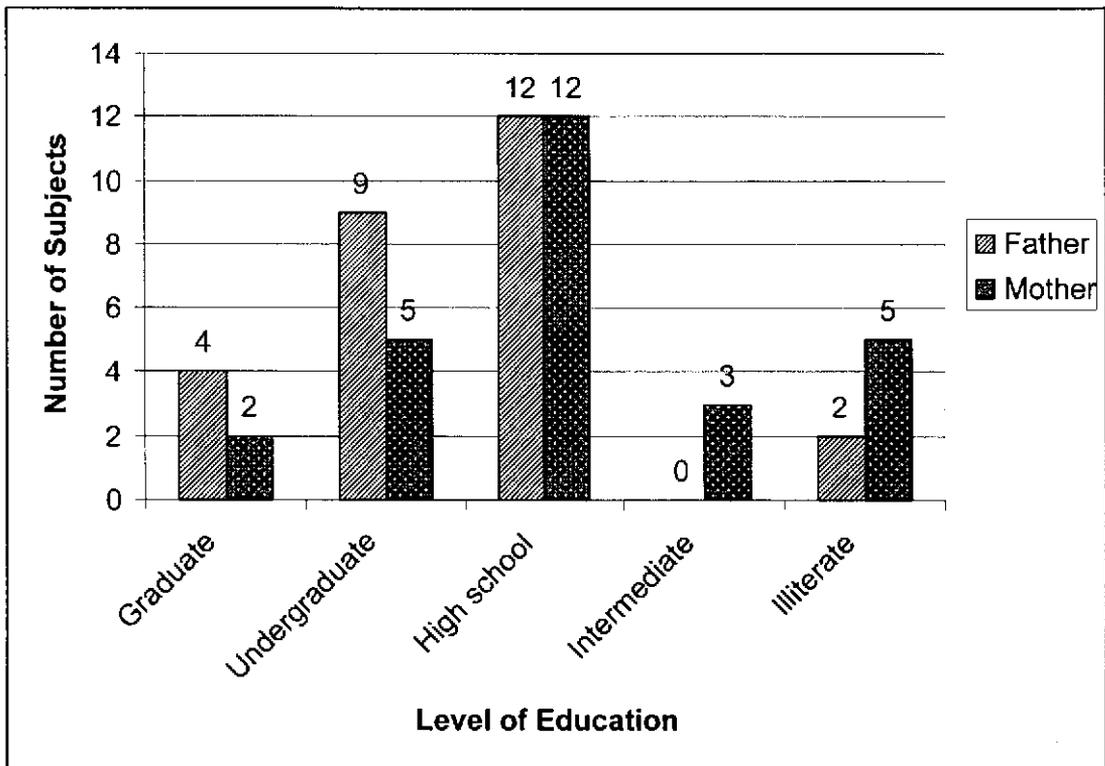


Table 5.6

Item 7 & 8 : Fathers' and mothers' employment status

Employment Status	Father	%	Mother	%
Employed	26	96%	6	22%
Unemployed	1	4%	21	78%
Total	27	100%	27	100%

Table 5.6 describes (Item 7 & 8) *the fathers' and mothers' employment status*. The employment status was categorized under (*employed, unemployed*). As shown in the table 96% of fathers and 22% of mothers are employed. 4% of fathers, and 78% mothers are unemployed. Results indicate that the number of employed fathers' is much higher than that of employed mothers.

Graph 5.6

Item 7 & 8 : Fathers' and mothers' employment status

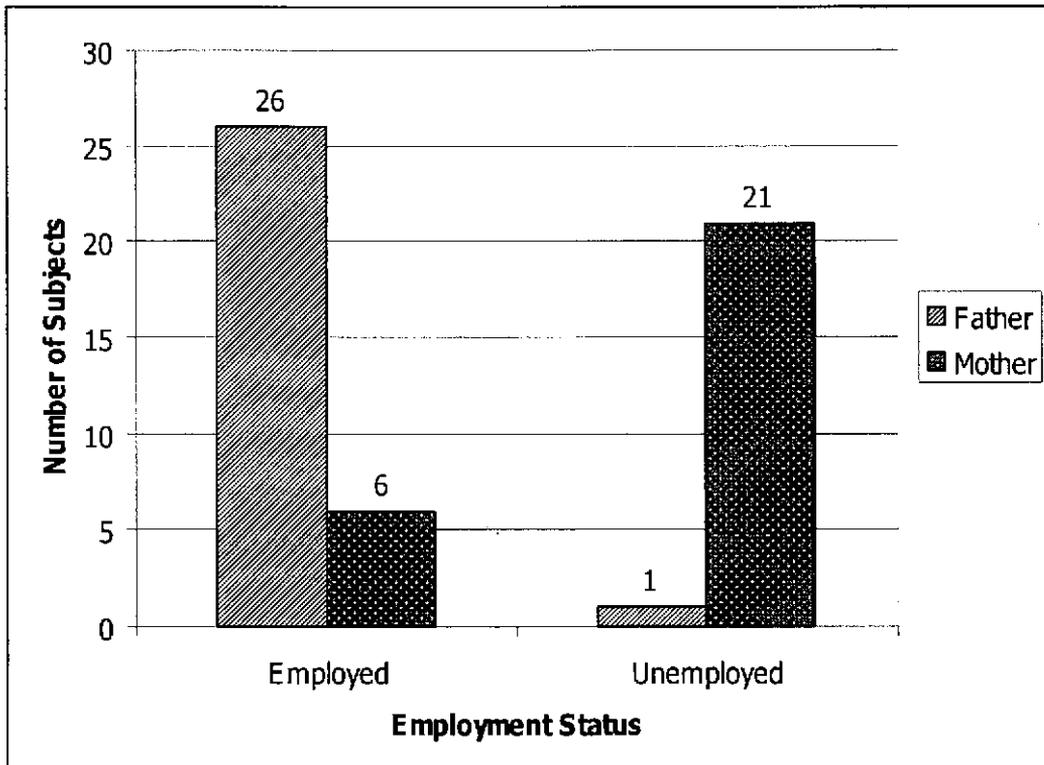


Table 5.7

Item 9 & 10 : Fathers' and mothers' monthly salary

Monthly Salary	Father	%	Mother	%
No salary (non-working)	0	0%	21	78%
Less than 2000 SR*	3	11%	0	0%
Less than 5000 SR	9	33%	0	0%
More than 5000 SR	15	56%	6	22%
Total	27	100%	27	100%

* (SR= Saudi Riyals)

Table 5.7 describes (Item 9 & 10) *fathers' and mothers' monthly salary*. The monthly salary was grouped under (*less than 2000, less than 5000, & more than 5000*). As shown in table 11% of fathers and 0% of mothers have a monthly salary of less than 2000SR. 33% of fathers and 0% of mothers have a monthly salary of less than 5000SR. Results indicate that the 56% of fathers and 22% of the mothers have a monthly salary in the range of more than 5000 Saudi Riyals (SR). The 22% of mothers who earn more than 5000SR reflect the percentage of working mothers. While the 78% of mothers earning no salary are non-working mothers. This implies that mothers in the sample who are working receive above average salaries.

Graph 5.7

Item 9 & 10: Fathers' and mothers' monthly salary

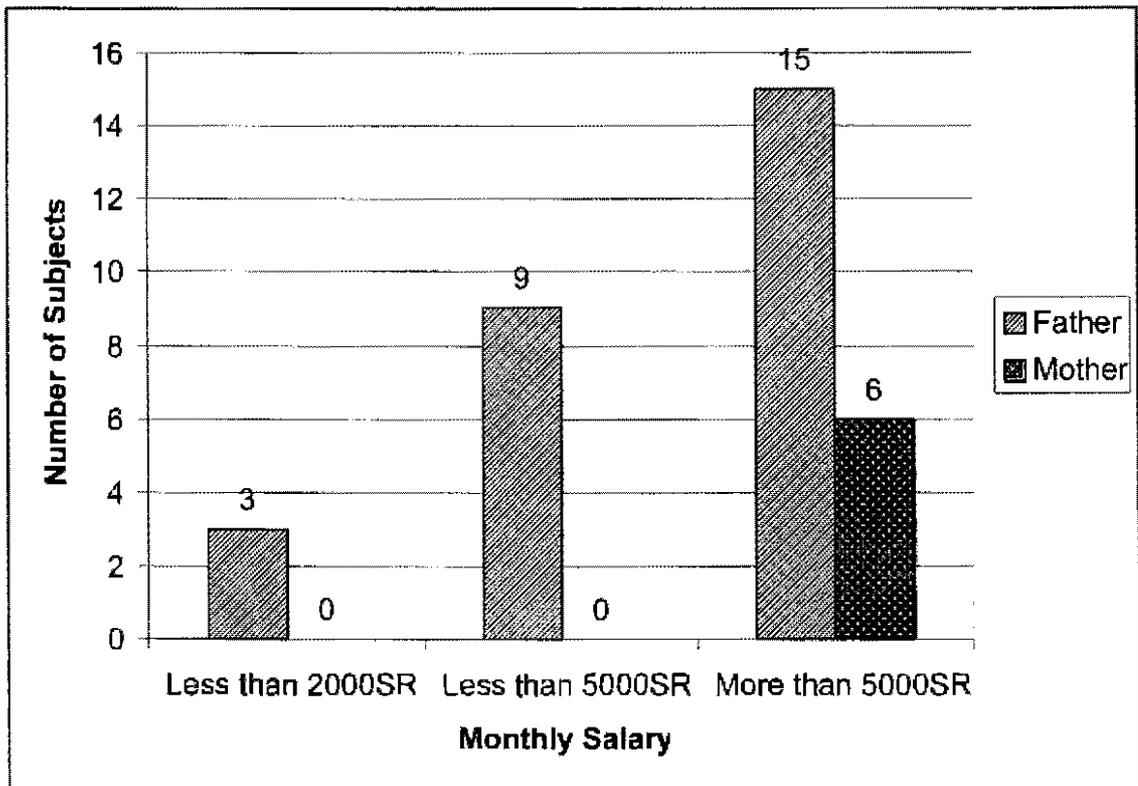


Table 5.8

Item 11: Number of other family members living with the family

Type of Family Member	No. of Subjects	%
Grandparent	5	19%
Uncle	0	0%
Aunt	3	11%
None	19	70%
Total	27	100%

Table 5.8 describes (Item 11) *the number of other family members living with the family*. The type of family member were grouped under (*grandparent, uncle, aunt, none*). As shown in the table 19% of the families had grandparents living with them. None of the families had uncles living with them. 11% of families had aunts living with them. 70% families lived alone. Results indicate that the majority of the families live on their own.

Graph 5.8

Item 11: Number of other family members living with the family

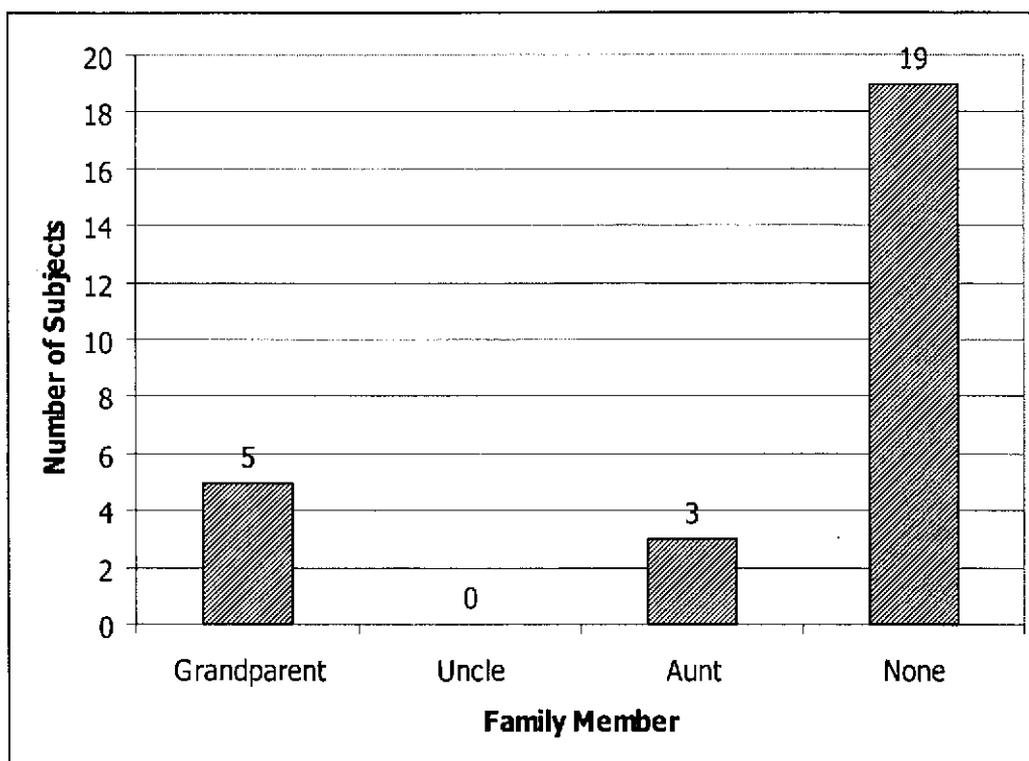


Table 5.9

Item 12: Type of residence

Type of Residence	No. of Subjects	%
Rented Apartment	17	63%
Rented Villa	1	4%
Own Apartment/Villa	9	33%
Total	27	100%

Table 5.9 describes (Item 12) *the type of residence in*. The type of residence was shown as three categories (*rented apartment, rented villa, and own apartment/villa*). As shown in the table, 63% of families live in rented apartments. 4% of families live in a rented villa. 33% of families own either an apartment or villa which. Results indicate that the majority of the families rent their residence.

Graph 5.9

Item 12: Type of residence for the family

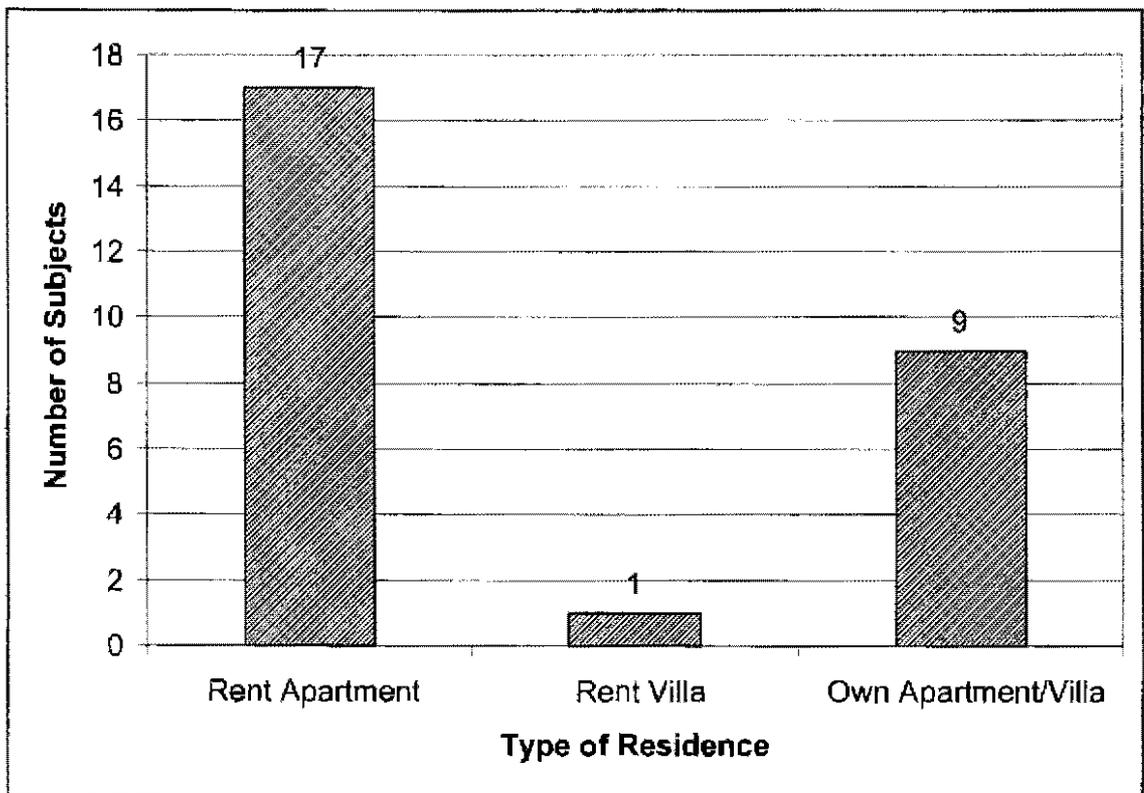


Table 5.10

Item 13: Other special needs children in the family

Other Special Needs Children	No. of Subjects	%
Yes	7	26%
No	20	74%
Total	27	100%

Table 5.10 describes (Item 13) *other disabled children in the family*. The answer was either (Yes or No). As shown in the table, 26% of the families had other special needs children in the family. 74% of the families had only the one special needs child. Results indicate that the majority of the families in the sample have one special needs child.

Graph 5.10

Item 13: Other special needs children in the family

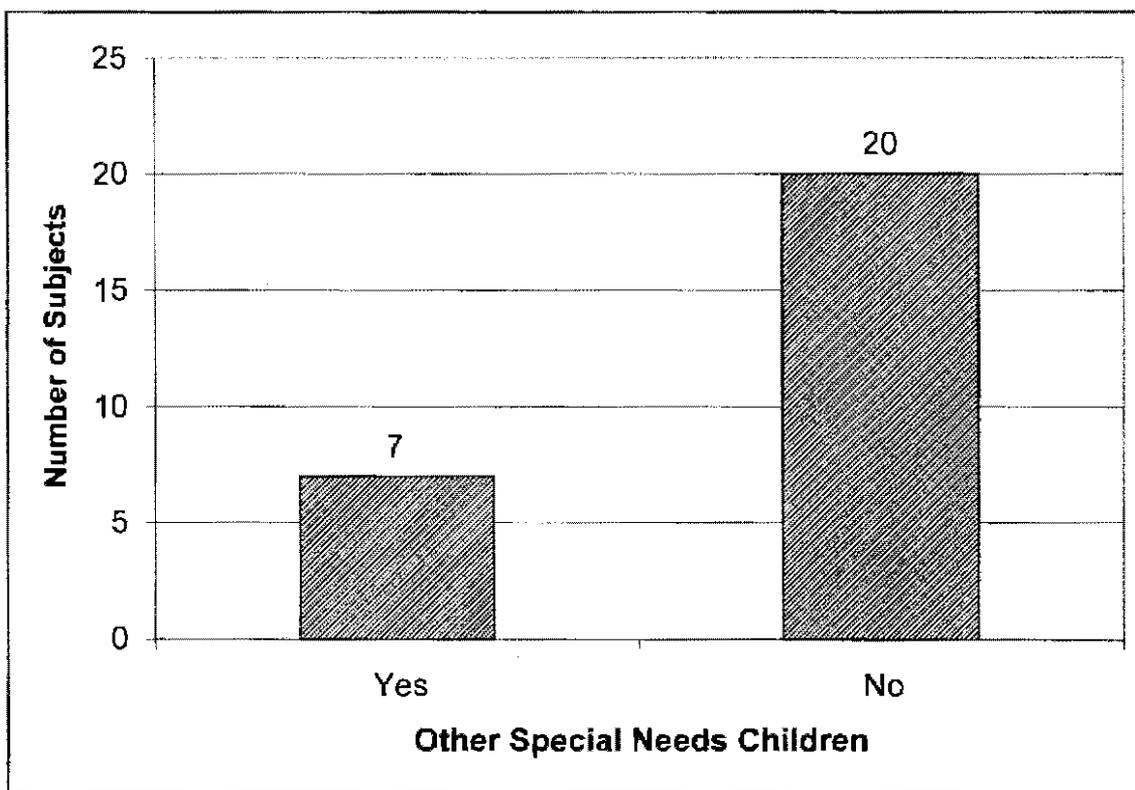


Table 5.11

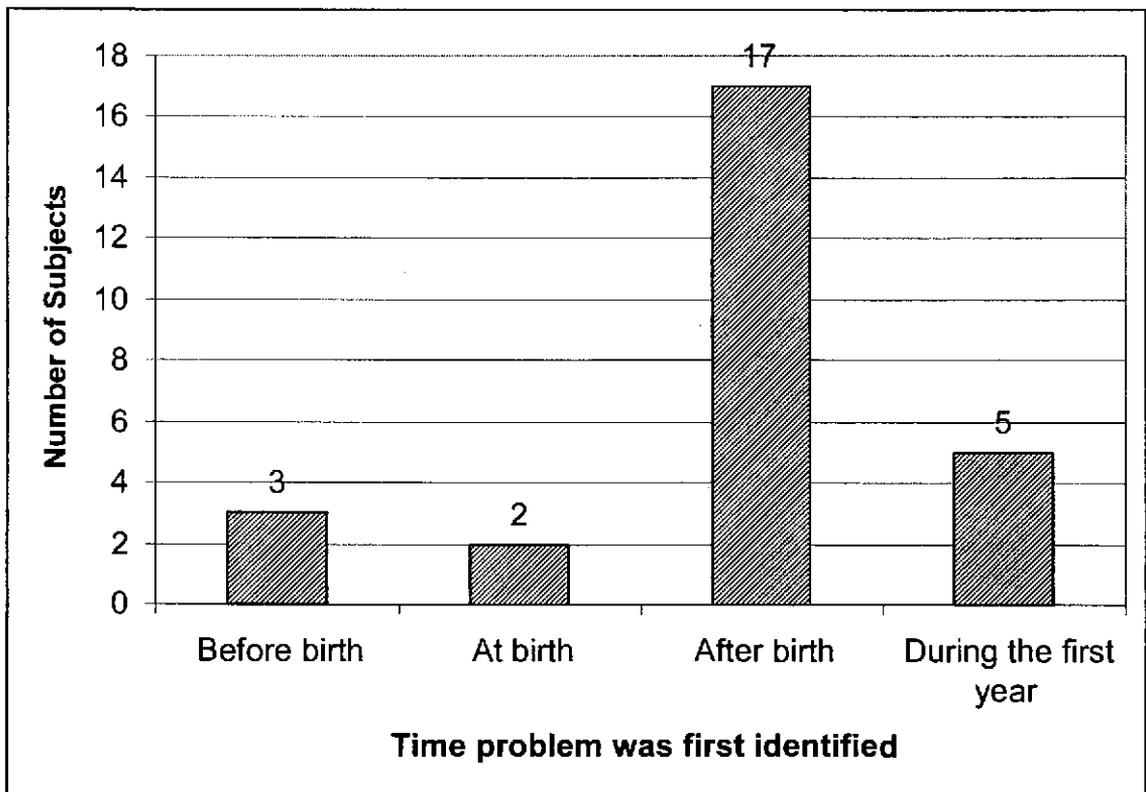
Item 14: Time the child's impairment was first identified

Time Problem was Identified	No. of Subjects	%
Before birth	3	11%
At birth	2	7%
After birth	17	63%
During the first year	5	19%
Total	27	100%

Table 5.11 describes (Item 14) *the time the child's impairment was first identified*. The time of identification was grouped under four groupings (*before birth, at birth, after birth, during the first year*). As shown in the table 11% of the families found out about their child's impairment before birth. 7% found out at birth. 63% found out after birth, and 19% found out during the first year of their child's life. Results indicate that most the highest number of families in the sample found out about their child's impairment after their child's birth.

Graph 5.11

Item 14: Time child's impairment/problem was first identified



In the previous section of this chapter the data from the Questionnaire of Family's Background Information was analyzed and the results were interpreted. In the next section the data from the Mother's Needs Questionnaire will be reported, and the results will be interpreted.

5.1.2 The Mother's Needs Questionnaire:

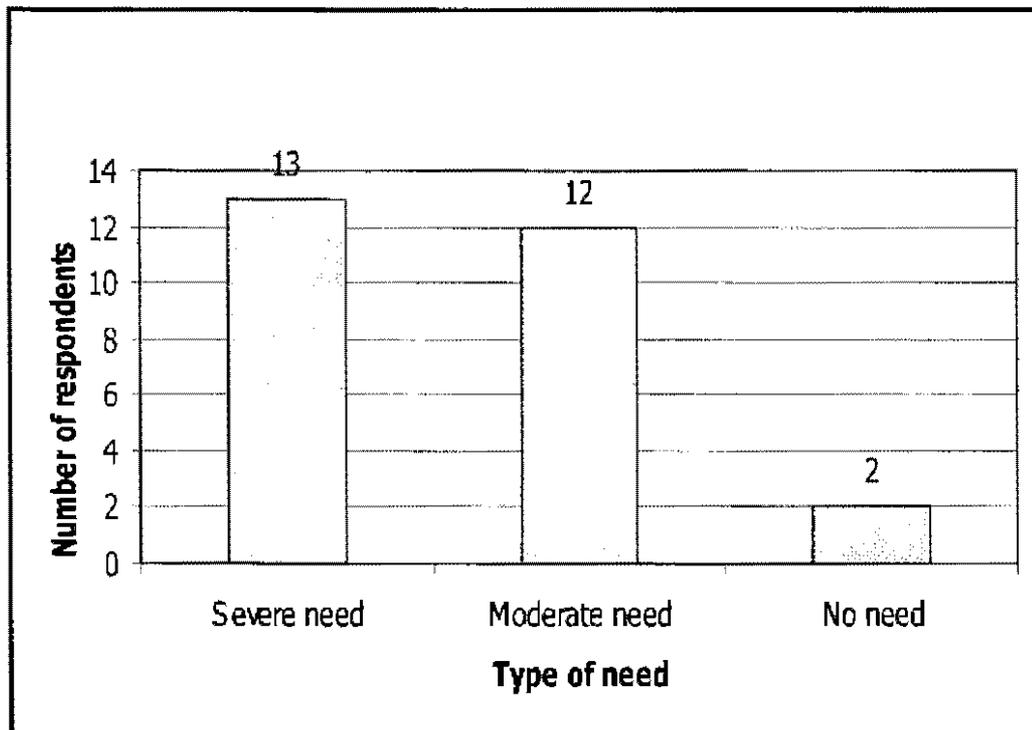
As mentioned in chapter 4, the objective of the study was to identify the needs of the mothers in the sample, and the extent to which the actual identified needs are met by the early intervention services provided by the centre where the study was performed. Analysis of the gathered data will identify the needs of the mothers, and also to find if the needs of the mothers are met by the presently available early intervention services. A questionnaire consisting of 23 items covering five broad categories of needs was designed (as shown in the sample "Mother's Needs Questionnaire" in appendix C). The categories depict the different types of needs identified by the pilot study, which are as follows:

- **Category (I):** Information about diagnosis, prognosis, and treatment (Items: 1,2,3,12,14).
- **Category (II):** Type of intervention for child/family (Items: 4,5,10,16,17).
- **Category (III):** Professional support from agency/centre (Items: 6,7,8,19,21,23).
- **Category (IV):** Social support from family/friend (Items: 9,11,13,18,20).
- **Category (V):** Materialistic support for the family (Items: 15,22)

In the following section, an itemised presentation of data of the expressed needs of the mothers from the Mothers' Needs Questionnaire is shown in tables and graphs. Following the itemized presentation, the data that was gathered from the Mothers' Needs Questionnaire is presented in two main tables. Table 5.12 shows the responses for each item on the questionnaire, which are expressed in percentages to assess the overall degree of the various needs. Table 5.13 shows the frequencies of the responses and their corresponding percentages according to the different types of needs.

Graph 5.12

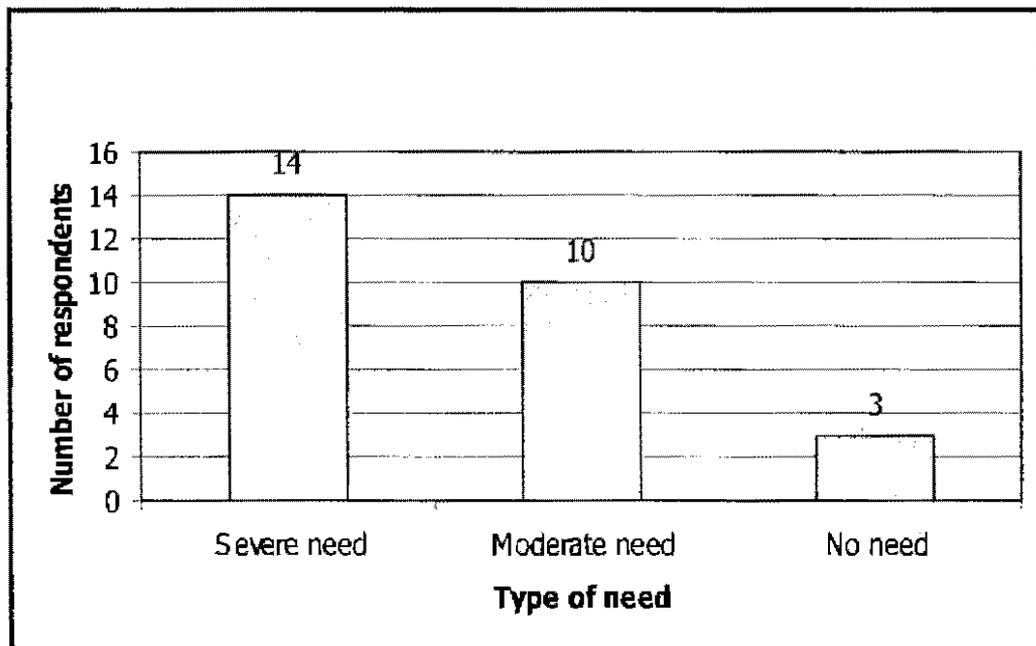
Item 1: More information about child's problem



Graph 5.12 shows the distribution of mothers' need to item 1: *more information about child's problem*. 13 mothers stated a severe need for information about their child's disability, 12 mothers stated moderate need, while two mothers stated no need. Table 5.12 shows that 48% of the respondents expressed a severe need for more information about their child's problem/impairment, 44% expressed moderate need while 7% expressed no need. Therefore, results show that the mothers expressed severe need for information about child's problem's.

Graph 5.13

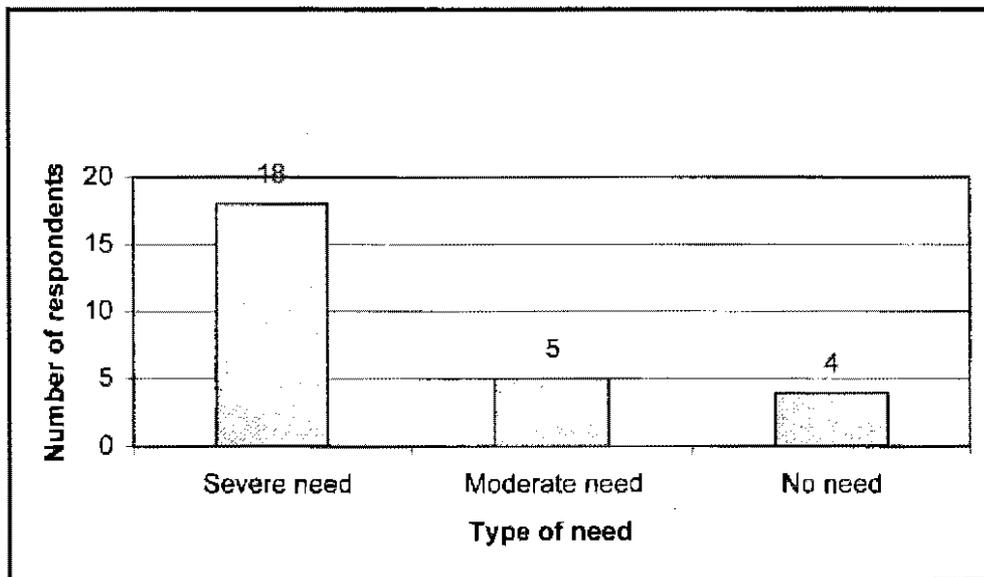
Item 2: More information about child's development



Graph 5.13 shows the distribution of mothers' need to item 2: *more information about child's development*. 14 mothers stated a severe need for more information about their child's development, 10 mothers stated moderate need, while three mothers stated no need. Table 5.12 shows that 52% of the respondents expressed a severe need for more information about their child's development, 37% expressed moderate need while 11% expressed no need. Results show the importance and need of this item to the mothers, for 52% of the mothers expressed a severe need for this item.

Graph 5.14

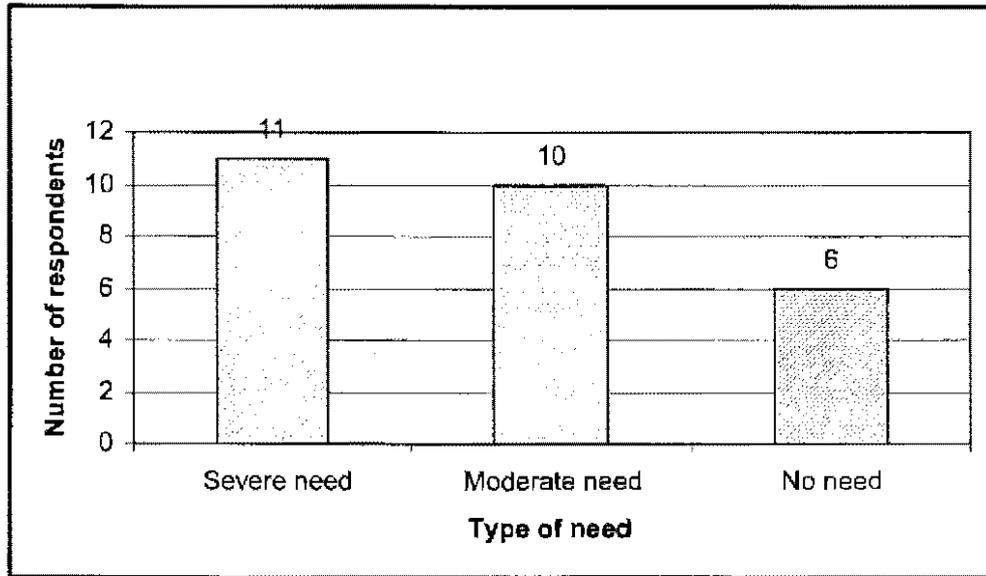
Item 3: More information about child's social and emotional behavior



Graph 5.14 shows the distribution of mothers' need to item 3: *More information about child's social/emotional behavior*. 18 mothers stated a severe need for information about their child's social/emotional behavior, five stated moderate need, while four stated no need. Table 5.12 shows that 67% of the mothers expressed a severe need for more information about their child's social/emotional behavior, 19% expressed moderate need, while 15% expressed no need. Results show the importance of this service to the mothers, as 67% of the mothers expressed severe need for this item, which indicated that this item was the top priority need for the mothers.

Graph 5.15

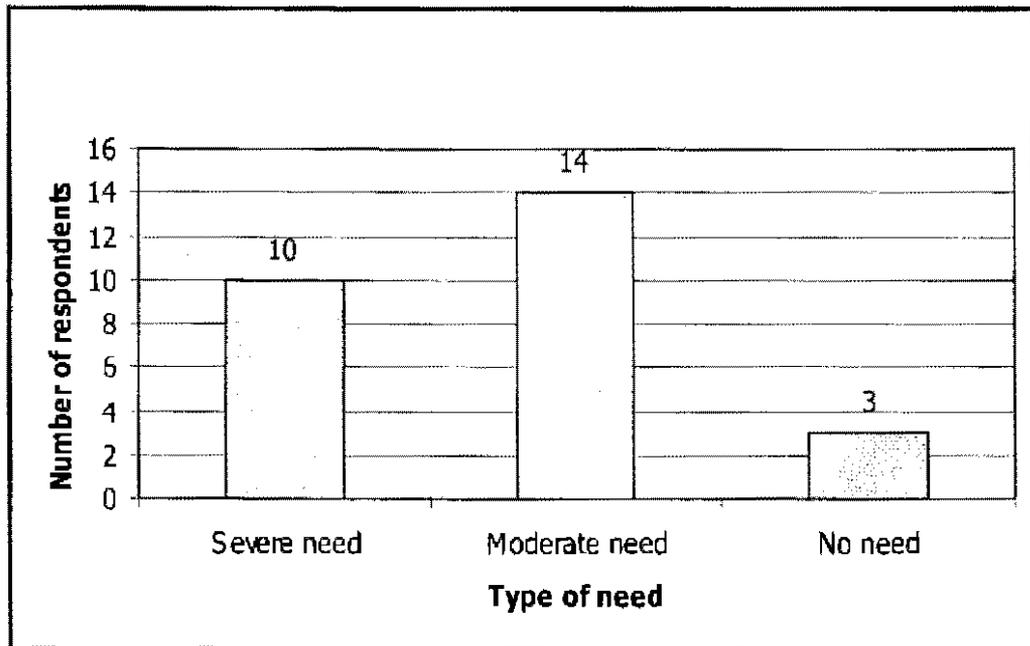
Item 4: More center-based services for the child



Graph 5.15 shows the distribution of mothers' need to item 4: *more center-based services for child*. 11 mothers stated severe need for more center-based services for their child, 10 mothers stated moderate need, while six mothers stated no need. Table 5.12 shows that 41% of the mothers expressed a severe need for center-based services for their child, 37% expressed moderate need for this item, and 22% expressed no need. Results indicate that mothers' need for this service is very high.

Graph 5.16

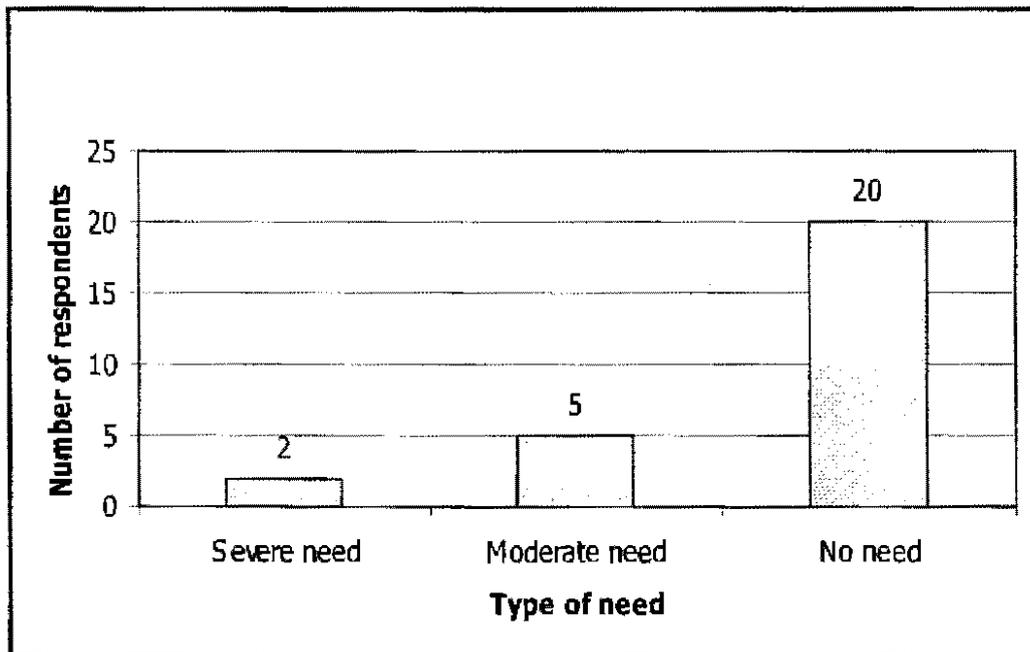
Item 5: More home-based services for the child/family



Graph 5.16 shows the distribution of mothers' need to item 5: *more home-based services for child/family*. 10 mothers stated severe need for more home-based services for their child/family, 14 mothers stated moderate need, while 3 mothers stated no need. Table 5.12 shows that 37% of the mothers expressed a severe need for home-based services, 52% expressed moderate need, while 11% expressed no need. Results indicate that mothers' need for this service was important, as 37% expressed severe need and 52% expressed moderate need for this service. Which shows that the need for this service is very important to the mothers in the sample. However, the designation of this service as moderate need by the the mothers could be attributed to their lack of knowledge about the benefits of home service.

Graph 5.17

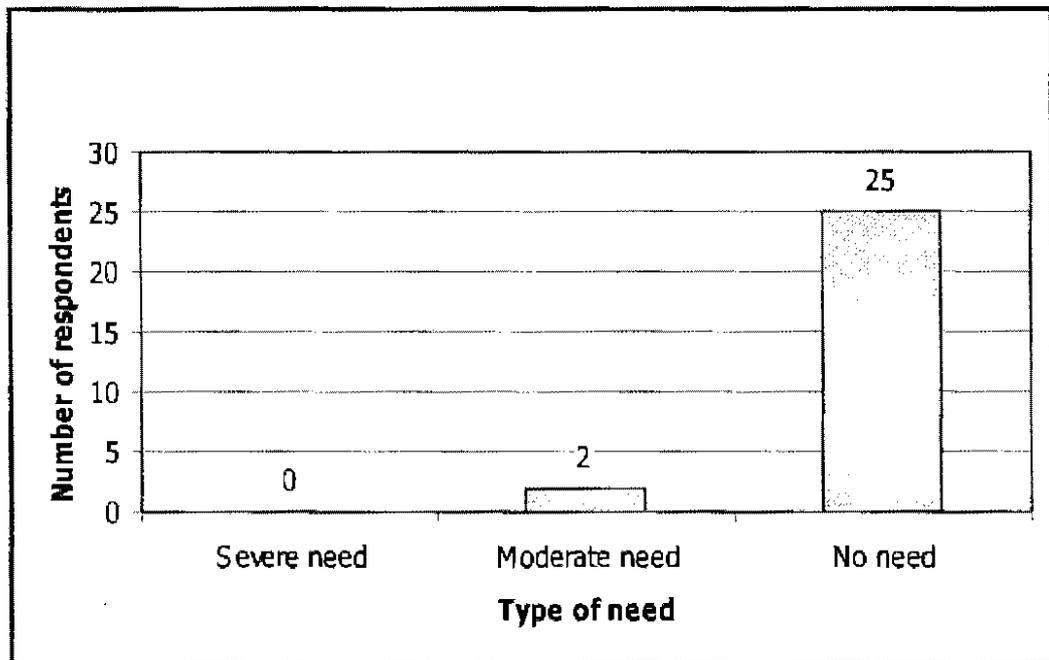
Item 6: Solving problems with my own family



Graph 5.17 shows the distribution of mothers' need to item 6: *solving problems with my own family*. Two mothers stated severe need for solving problems with their own family, five mothers stated moderate need, while 20 mothers stated no need. Table 5.12 shows that 7% of the mothers expressed severe need for help in solving problems with their own family, 19% expressed moderate need, while 74% expressed no need. Results indicate that this service is not importance to the mothers, as 74% expressed no need for this item.

Graph 5.18

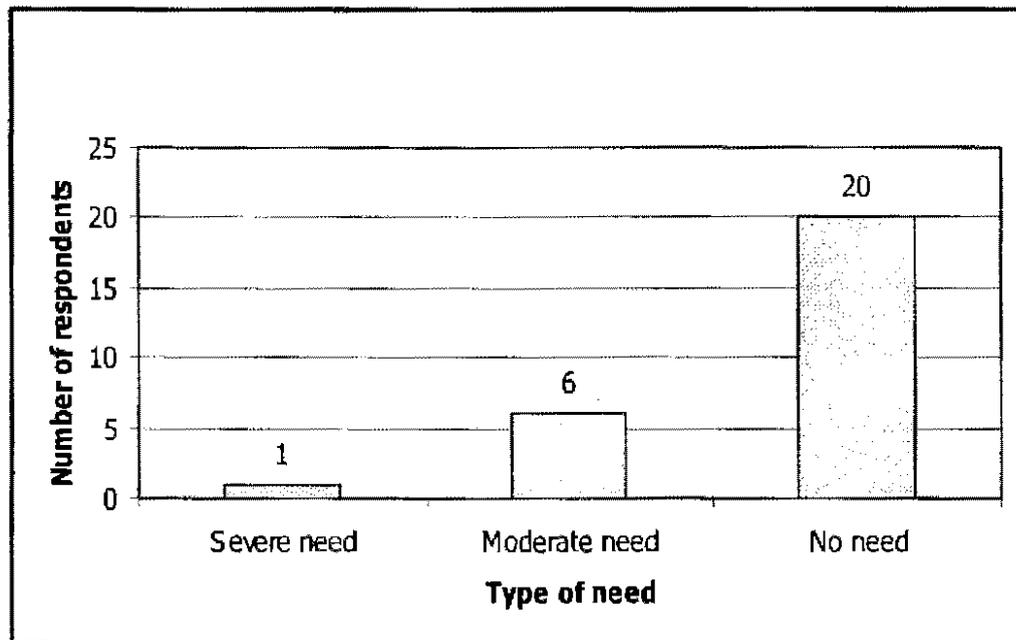
Item 7: Solving problems with my spouse



Graph 5.18 shows the distribution of mothers' need to item 7: *solving problems with my spouse*. None of the mothers stated severe need for help in solving problems with their spouse, two mothers stated moderate need, while 25 mothers stated no need. Table 5.12 shows that none of the mothers expressed severe need for help in solving problems with their spouse, 7% expressed moderate need, while 93% expressed no need for help. Results indicate that this item is not important to the mothers in this study, as 93% expressed no need for this service.

Graph 5.19

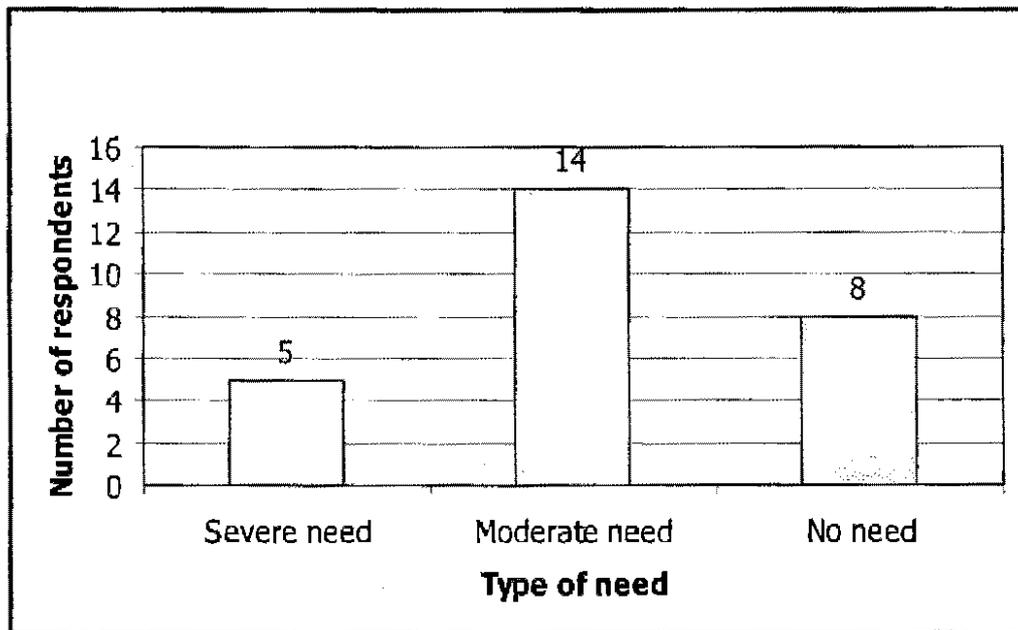
Item 8: Solving problems with my other children



Graph 5.19 shows the distribution of mothers' need to item 8: *solving problems with my other children*. One mother stated a severe need for help in solving problems with her other children, six mothers stated moderate need, while 20 mothers stated no need. Table 5.12 shows that 4% of the mothers expressed severe need for help in solving problems with their children, 22% expressed moderate need, while 74% expressed no need. Results indicate that the need for this service to the mothers is not important as 74% expressed no need for this service.

Graph 5.20

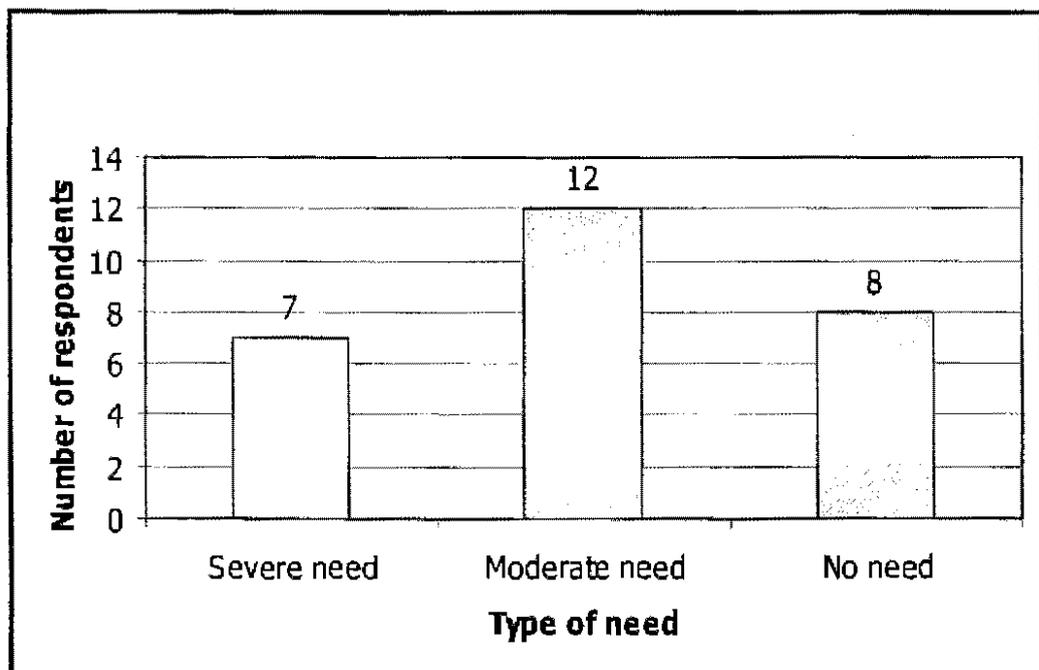
Item 9: Assistance with raising my children



Graph 5.20 shows the distribution of mothers' need to item 9: *assistance with raising my children*. Five mothers stated severe need for assistance in raising their children, 14 stated moderate need, while eight stated no need. Table 5.12 shows that 19% of the mothers expressed a severe need for assistance in raising their children, 52% expressed moderate need, while 30% expressed no need. Results indicate that the need for this service is of moderate importance to the mothers in the sample.

Graph 5.21

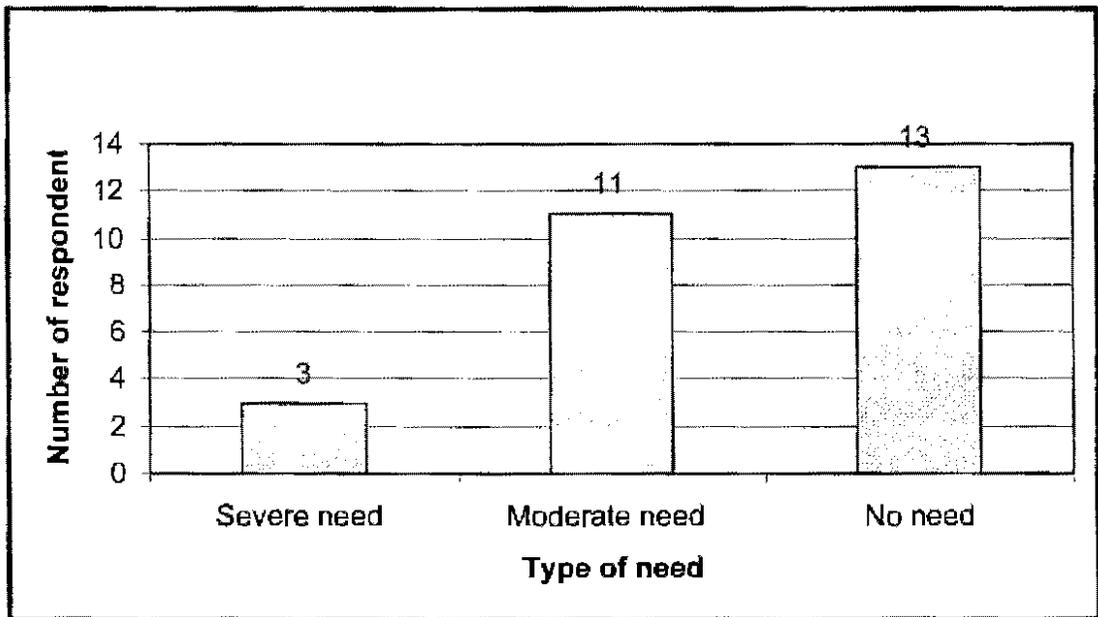
Item 10: Better medical services for my child



Graph 5.21 shows the distribution of mothers' need to item 10: *better medical services for my child*. seven mothers stated severe need for medical services for their child, 12 stated moderate need, while eight stated no need. Table 5.12 shows that 26% of the mothers expressed a severe need for better medical services for their child, 44% expressed moderate need, while 30% expressed no need. Results indicate that this service is of moderate importance to the mothers in this study, as 44% of the mothers expressed moderate need for better medical services for their child.

Graph 5.22

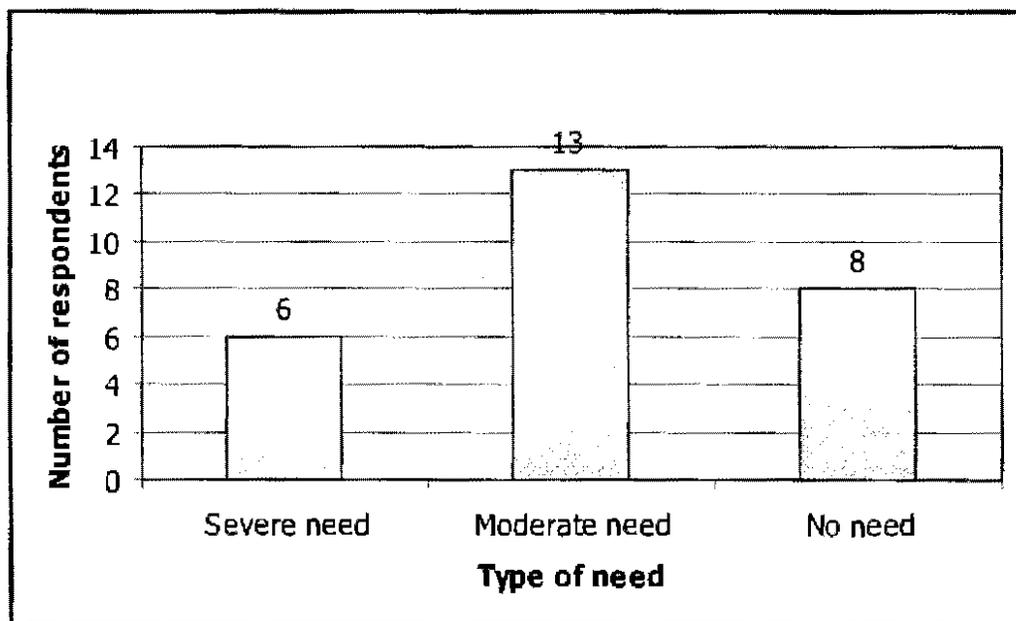
Item 11: Get in touch with another family with a special needs child



Graph 5.22 shows the distribution of mothers' need to item 11: *get in touch with another family with a special needs child*. Three mothers stated severe need for getting in touch with another family with a disabled child, 11 stated moderate need, while 13 stated no need. Table 5.12 shows that 11% of the mothers expressed a severe need for getting in touch with another family with a special needs child. 41% expressed moderate need, while 48% expressed no need. Results indicate that this service is of limited significance to the mothers, as 48% expressed no need for this service.

Graph 5.23

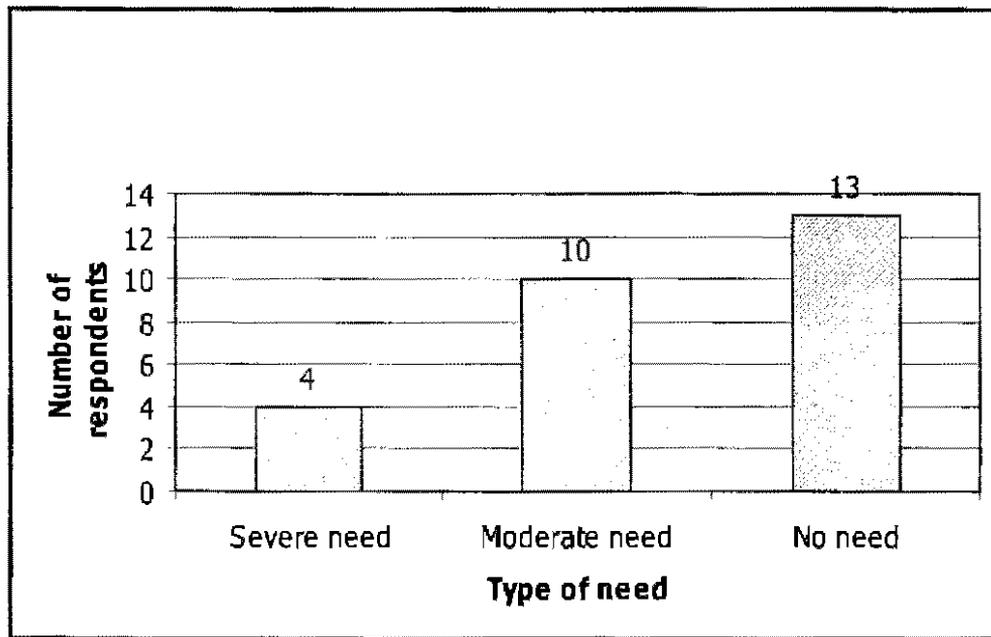
Item 12: Instructions on how to deal with my problems



Graph 5.23 shows the distribution of mothers' need to item 12: *instructions on how to deal with my problems*. Six mothers stated severe need for instructions on how to deal with their problems, 13 stated moderate need, while eight stated no need. Table 5.12 shows that 22% of the mothers expressed a severe need for instructions on how to deal with their problems, 48% expressed moderate need, while 30% expressed no need. Results indicate that this service is of moderate importance to the mothers in the sample, as 48% of the mothers indicated moderate need for instructions on how to deal with their problems.

Graph 5.24

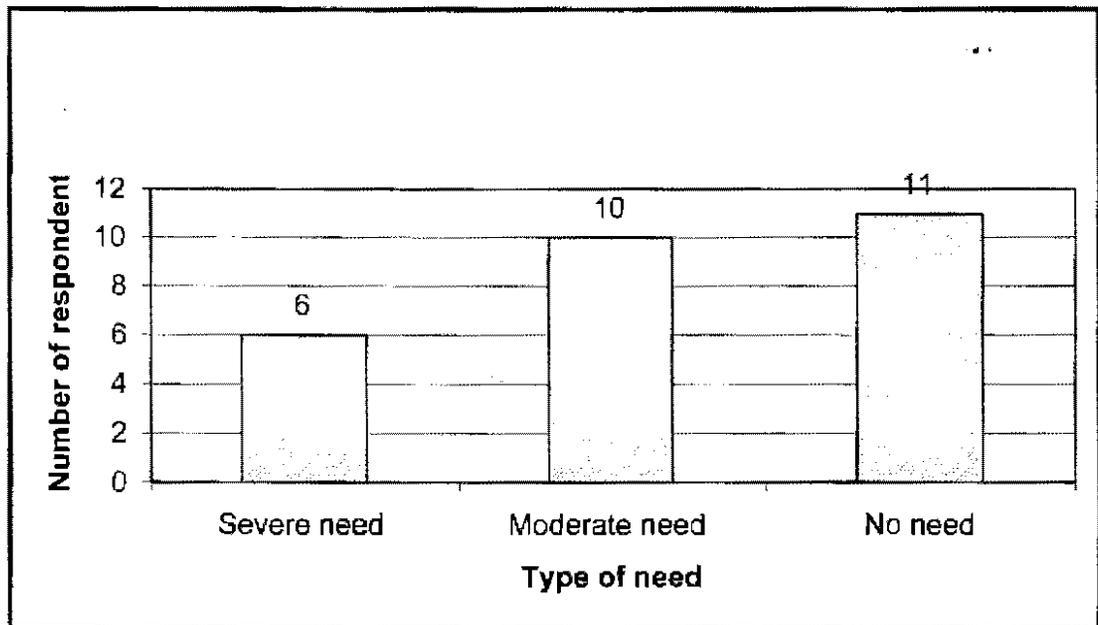
Item 13: Meet a person who can help me relate better to my problems



Graph 5.24 shows the distribution of mothers' need to item 13: *meet a person who can help me relate better to my problems*. Four mothers stated severe need to meet a person who can help them relate better to their problems, 10 stated moderate need, while 13 stated no need. Table 5.12 shows that 15% of the mothers expressed a severe need for meeting a person who can help them relate better to their problems, 37% expressed moderate need, while 48% expressed no need. Results indicate that this service is of a limited importance to the mothers in the sample as 48% of the mothers reported no need for this service.

Graph 5.25

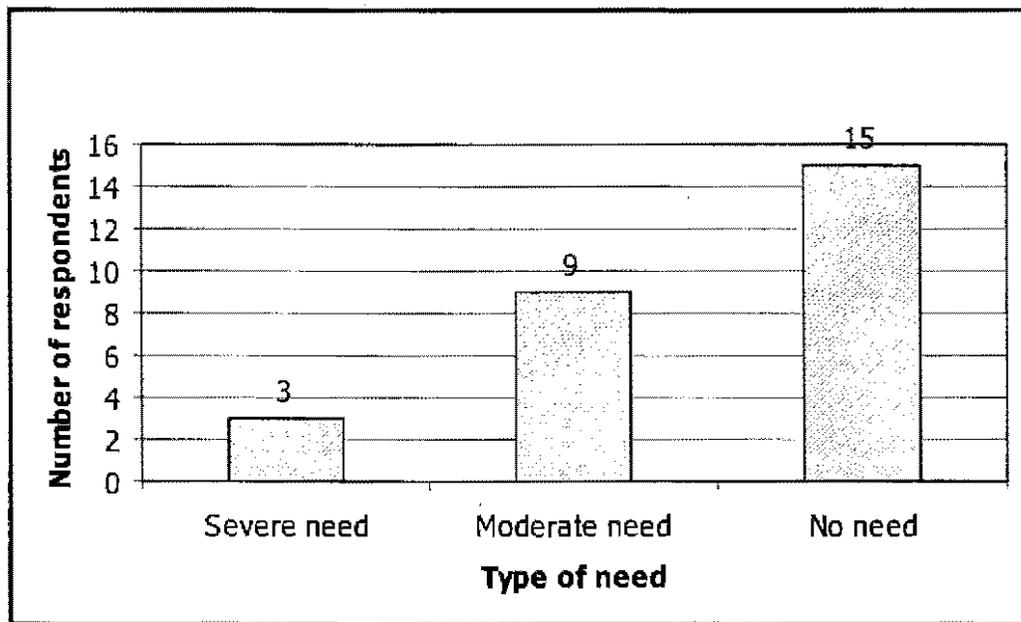
Item 14: Teach me how to have my children better relate to their special needs sibling



Graph 5.25 shows the distribution of mothers' need to item 14: *teach me how to have my children better relate to their special needs sibling*. Six mothers stated severe need to know how to have their children better relate to their special needs sibling, 10 mothers stated moderate need, while 11 stated no need. Table 5.12 shows that 22% of the mothers expressed a severe need, 37% expressed moderate need, while 41% expressed no need. Results indicate that this service is of limited importance to the mothers in the sample as 41% of the mothers reported no need for this service.

Graph 5.26

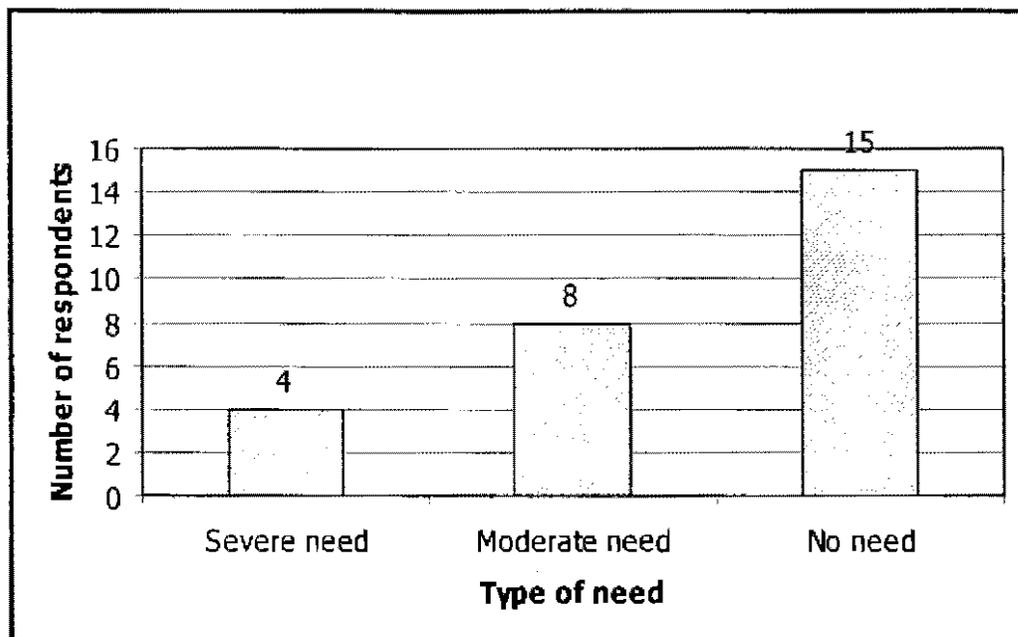
Item 15: Assistance with finance



Graph 5.26 shows the distribution of mothers' need to item 15: *assistance with finance*. Three mothers stated severe need for assistance with finance, 10 mothers stated moderate need, while 11 stated no need. Table 5.12 shows that 11% of the mothers expressed a severe need for assistance with finance, 33% expressed moderate need, while 56% expressed no need. Results indicate that this service is of limited significance to the mothers in the sample, as 56% of the mothers expressed no need for this service.

Graph 5.27

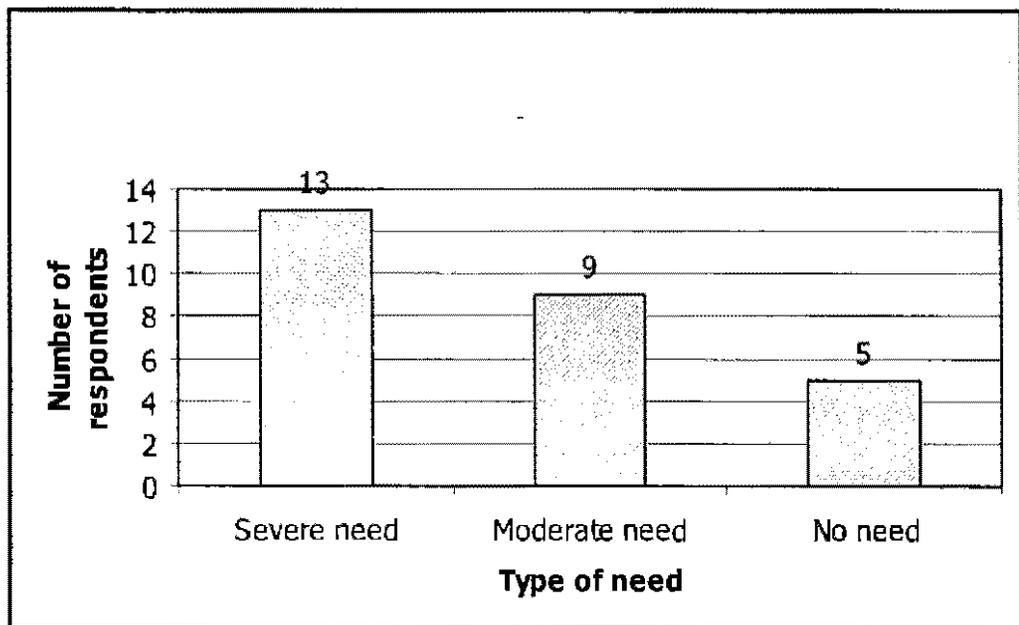
Item 16: Provide better technical aids



Graph 5.27 shows the distribution of mothers' need to item 16: *provide better technical aids*. Four mothers stated severe need for better technical aids, eight mothers stated moderate need, while 15 stated no need. Table 5.12 shows that 15% of the mothers expressed a severe need for better technical aids, 30% expressed moderate need, while 56% expressed no need. Results indicate that this service is of limited significance to the mothers in the sample, as 56% of the mothers expressed no need for this service.

Graph 5.28

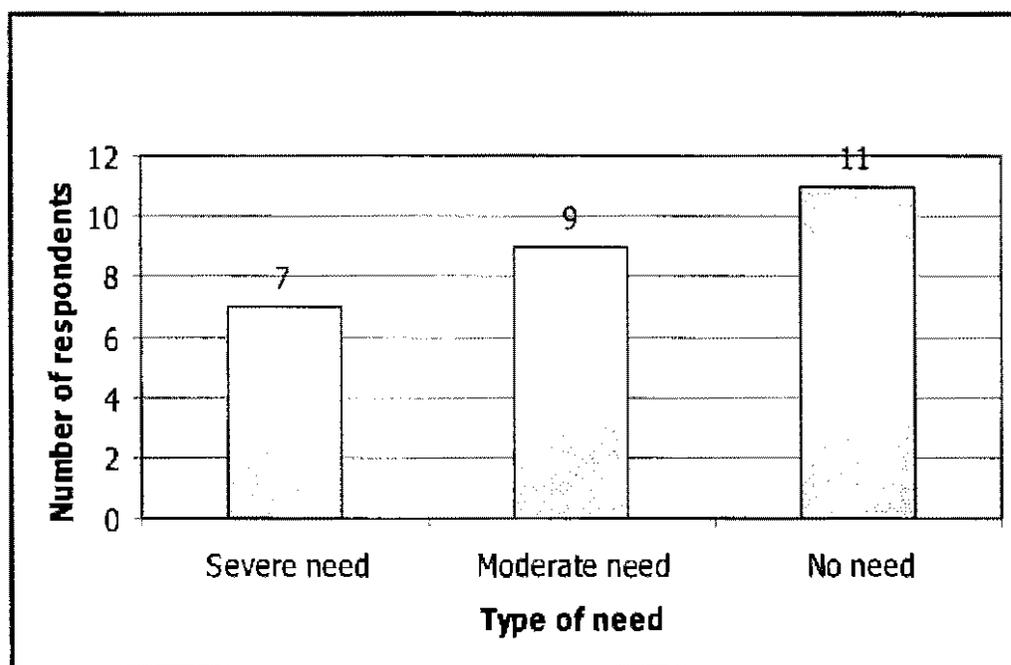
Item 17: Get in touch with other centers that may help my child and me



Graph 5.28 shows the distribution of mothers' need to item 17: *get in touch with other centers that may help my child and me*. 13 mothers stated severe need for getting in touch with other centers that may help their child and them, eight mothers stated moderate need, while 15 stated no need. Table 5.12 shows that 48% of the mothers expressed a severe need for getting in touch with other centres that may help their child and them, 33% expressed moderate need, while 19% expressed no need. Results indicate that this service is of importance to the mothers in the sample, as 48% of the mothers expressed severe need for this service.

Graph 5.29

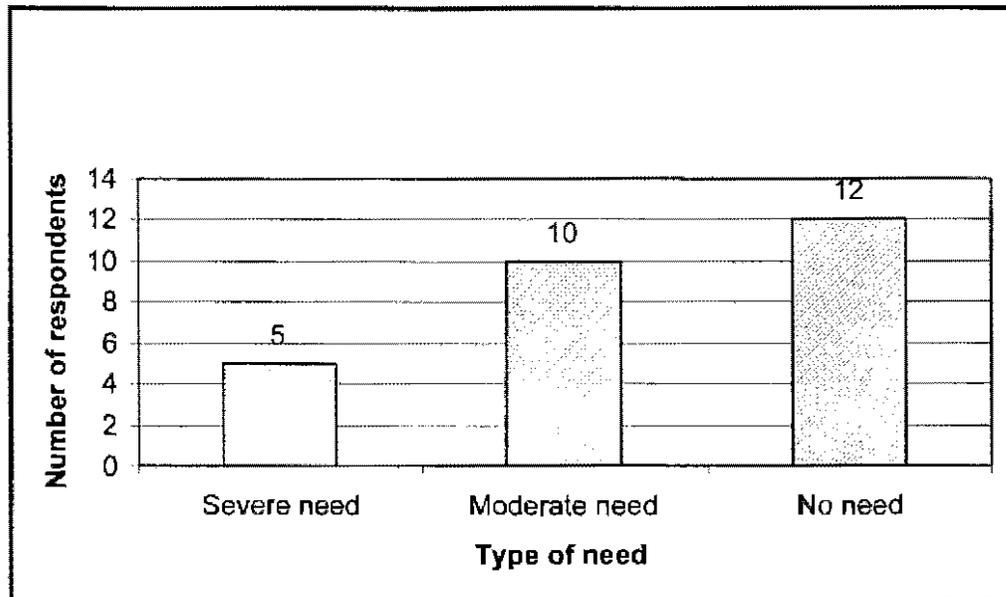
Item 18: To find time for myself



Graph 5.29 shows the distribution of mothers' need to item 18: *to find time for myself*. Seven mothers stated severe need for finding time for themselves, nine mothers stated moderate need, while 11 stated no need. Table 5.12 shows that 26% of the mothers expressed a severe need for finding time for themselves, 33% expressed moderate need, while 41% expressed no need. Results indicate that this service is of limited importance to the mothers in the sample.

Graph 5.30

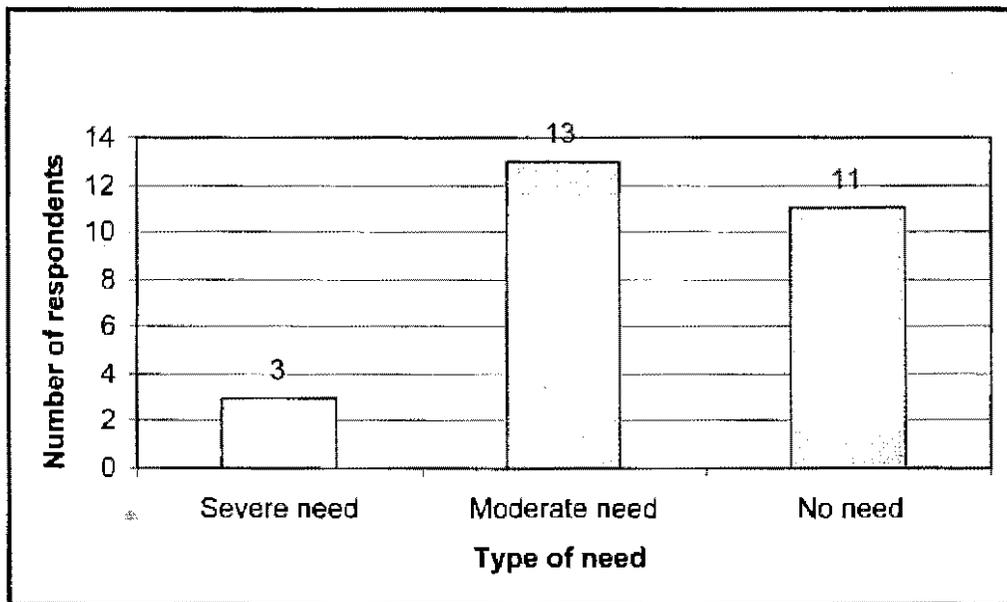
Item 19: To help me better organize my time and responsibilities



Graph 5.30 shows the distribution of mothers' need to item 19: *to help me better organize my time and responsibilities*. Five mothers stated severe need for help in better organize their time and responsibilities, 10 mothers stated moderate need, while 12 stated no need. Table 5.12 shows that 19% of the mothers expressed severe need for help to better organize their time and responsibilities, 37% expressed moderate need, while 44% expressed no need. Results indicate that this service is of limited importance to the mothers in the sample.

Graph 5.31

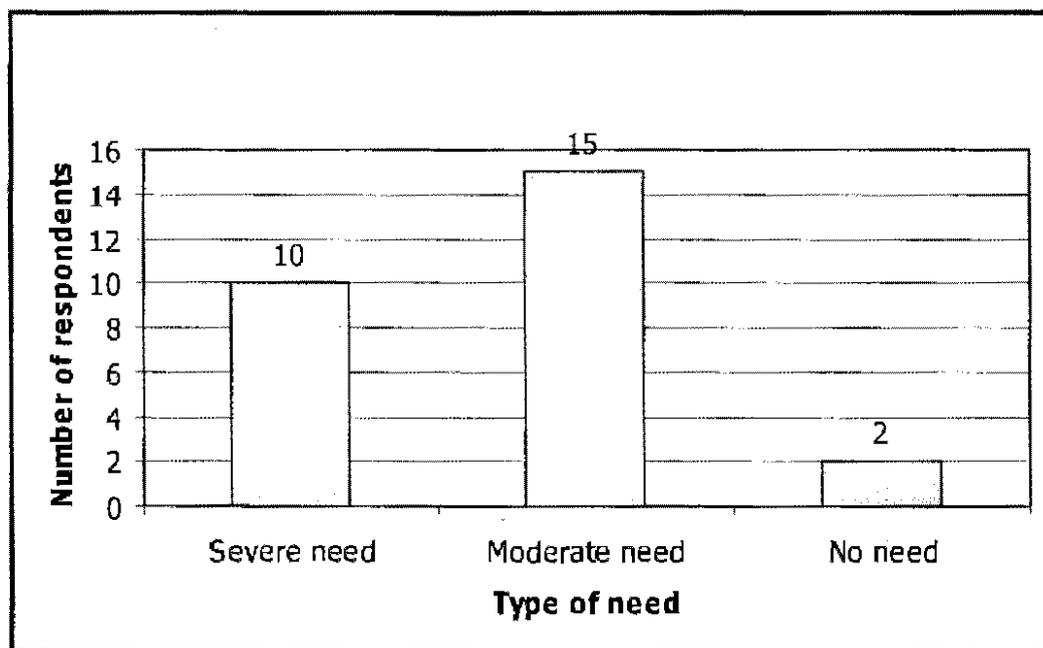
Item 20: To spend more time with my special needs child



Graph 5.31 shows the distribution of mothers' need to item 20: *to spend more time with my special needs child*. Three mothers stated severe need for help in learning how to spend more time with their special needs child, 13 mothers stated moderate need, while 11 stated no need. Table 5.12 shows that 11% of the mothers expressed a severe need for help in learning how to spend more time with their special needs child, 48% expressed moderate need, while 41% expressed no need. Results indicate that this service is of limited importance to the mothers in the sample.

Graph 5.32

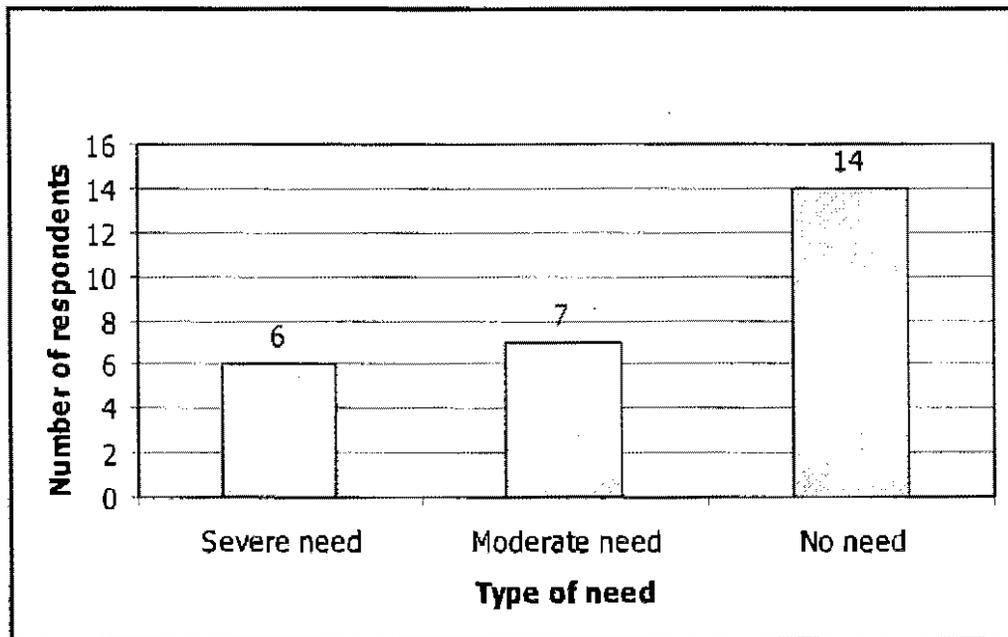
Item 21: To better help and understand my child



Graph 5.32 shows the distribution of mothers' need to item 21: *to better help and understand my child*. 10 mothers stated severe need of learn to better help and understand their child, 15 mothers stated moderate need, while two stated no need. Table 5.12 shows that 37% of the mothers expressed severe need for help in learning how to better help and understand their child. 56% expressed moderate need, while 7% expressed no need. Results indicate that this service is of importance to the mothers, as 56% of the mothers in the sample expressed moderate need and 37% expressed a severe need for this service.

Graph 5.33

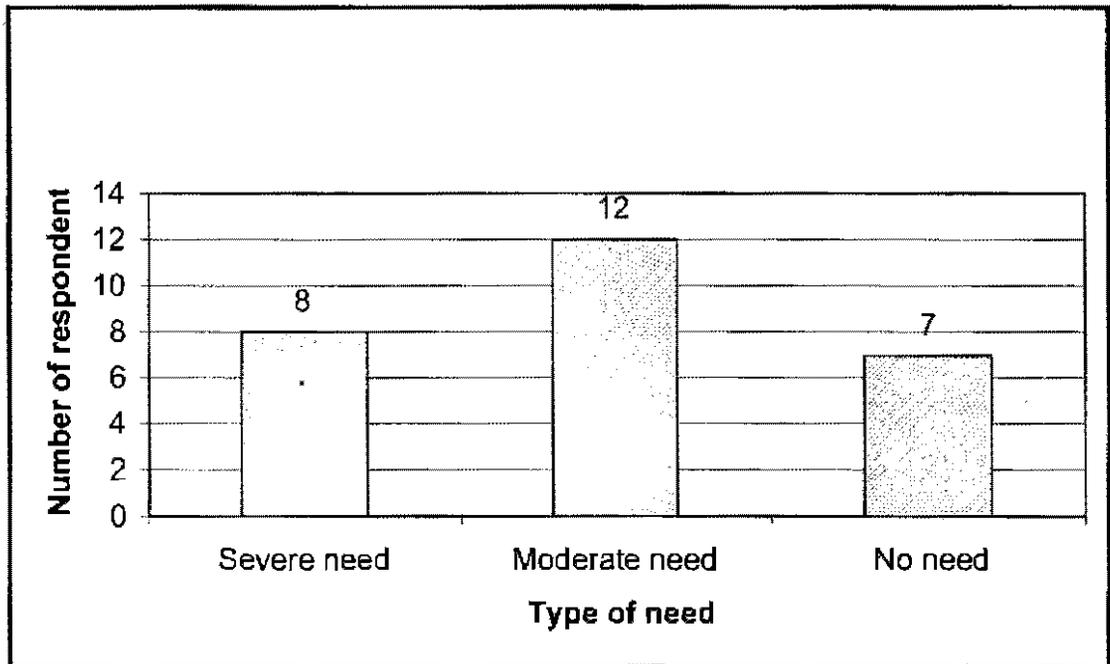
Item 22: To solve my transportation problem



Graph 5.33 shows the distribution of mothers' need to item 22: *solve my transportation problem*. Six mothers stated severe need to solve their transportation problem, seven mothers stated moderate need, while 14 stated no need. Table 5.12 shows that 22% of the mothers expressed severe need for help in solving their transportation problem. 26% expressed moderate need, while 52% expressed no need. Results indicate that this service is of limited importance to the mothers, as 52% of the mothers expressed no need for this service.

Graph 5.34

Item 23: How to involve the rest of the family with our special needs child



Graph 5.34 shows the distribution of mothers' need to item 23: *how to involve the rest of the family with our special needs child*. Eight mothers stated severe need to learn how to involve the rest of the family with child, 12 mothers stated moderate need, while seven stated no need. Table 5.12 shows that 30% of the mothers expressed severe need to learn how to involve the rest of the family with child, 44% expressed moderate need, while 26% expressed no need. Results indicate that this service is of moderate importance to the mothers in the sample.

5.1.2.1 Mothers' Needs Questionnaire: presentation of frequencies of mothers responses and categories of need

In this section, compiled data from Table 5.12 and Table 5.13 will be presented and the data will be interpreted. Percentages are rounded to the nearest whole number, therefore possible rounding errors may exist.

Analysis of the results in Table 5.12 shows the frequencies of mothers responses to the various items/services and their corresponding percentages as indicated in the questionnaire. Table 5.13 shows the frequencies of the responses and the corresponding percentages presented according to the different categories of needs as reported by the Mothers' Needs Questionnaire.

Item #	Items of Mothers' Needs Questionnaire	Count of Respondents			% of Total Respondents		
		Severe Need	Moderate Need	No Need	Severe Need	Moderate Need	No Need
	Category I: Information about diagnosis, prognosis, & treatment						
1	More information about child's problem	13	12	2	48%	44%	7%
2	More information about child's development	14	10	3	52%	37%	11%
3	More information about child's social/emotional behavior	18	5	4	67%	19%	15%
12	Instructions on how to deal with my problem	6	13	8	22%	48%	30%
14	Teach me how to have my children better relate to their special needs sibling	6	10	11	22%	37%	41%
	Category II: Type of intervention for child/family						
4	More centre based services for child	11	10	6	41%	37%	22%
5	More home based services	10	14	3	37%	52%	11%
10	Better medical services for child	7	12	8	26%	44%	30%
16	Provide better technical aids	4	8	15	15%	30%	56%
17	Get in touch with other centers that may help me and my child	13	9	5	48%	33%	19%
	Category III: Professional support from agency/centre						
6	Solving problems with my own family	2	5	20	7%	19%	74%
7	Solving problems with spouse	0	2	25	0%	7%	93%
8	Solving problems with my children	1	6	20	4%	22%	74%
19	To help me better organize my time and responsibilities	5	10	12	19%	37%	44%
21	To better help and understand my child	10	15	2	37%	56%	7%
23	How to involve the rest of the family with the special needs child	8	12	7	30%	44%	26%
	Category IV: Social support from family/friend						
9	Assistance in raising my children	5	14	8	19%	52%	30%
11	Get in touch with family of a special needs child	3	11	13	11%	41%	48%
13	Meet a person who can help me relate better to my problems	4	10	13	15%	37%	48%
18	To find time for myself	7	9	11	26%	33%	41%
20	To spend more time with my special needs child	3	13	11	11%	48%	41%
	Category V: Materialistic support for the family						
15	Assistance with finance	3	9	15	11%	33%	56%
22	Solve my transportation problem	6	7	14	22%	26%	52%

Table 5.12: Mothers' Needs Questionnaire: frequencies of responses in the various items & their corresponding percentages. (n=27)

Categories of Mothers' Needs Questionnaire	Frequency of Respondents			% of Total Respondents		
	Severe Need	Moderate Need	No Need	Severe Need	Moderate Need	No Need
I Information about diagnosis, prognosis & treatment	12	10	5	44%	37%	19%
II Type of intervention for child/family	8	11	8	30%	41%	30%
III Professional support from agency/center	6	8	13	22%	30%	48%
VI Social support from family/friend	5	11	11	19%	41%	41%
VI Materialistic Support for the family	4	8	15	15%	30%	56%

Table 5.13: Mothers' Needs Questionnaire: frequencies of responses & the corresponding percentages

Results indicate that the items pertaining to services grouped under category (I) *Information about diagnosis, prognosis, and treatment*, were of the highest relevance to the mothers in this study. Results show that 44% of the mothers expressed severe need, while 19% expressed no need for the services under this category. This indicates that the mothers in the sample may lack information about their child's impairment, and how to interact or accommodate issues and situations arising from raising a special needs child.

Items pertaining to services grouped under category (II) *Type of intervention for child/family* were of the second highest relevance to the mothers in this study. Results show that 30% of the mothers expressed severe need, and 30% expressed no need for the services under this category. As 41% of the mothers in the sample expressed moderate need for the type of intervention category, their responses could have been influenced by the fact that they are already receiving intervention services at The Help Centre.

Items pertaining to services grouped under category (III) *Professional support from agency/centre* were fourth in relevance to the mothers in this study. Results show that 22% of the mothers expressed severe need, while 48% of the mothers in the sample expressed no need for the services under this category. These results could imply that either there is a lack of collaboration between the professionals and the mothers, or that mothers are not aware of the different types of professional support services.

Items pertaining to services grouped under category (IV) *Social support from family/friends* were third in relevance to the mothers in this study. Results show that 19% of the mothers expressed severe need, and 41% of the mothers expressed no need for services under this category. This result indicate that the mothers in the sample expressed limited need for the services in the the social support category.

Items pertaining to services grouped under category (V) *Materialistic support for the family* was fifth and last in relevance to the mothers in this study. Results show that 15% of the mothers expressed severe need, and 56%

expressed no need for the services under this category. The socio-economic background and conditions of a family may to a large extent influence the responses of the mother and the need for any support. Cultural and social factors can also influence the expressed needs of the mothers.

In the next section the tables of the five categories of needs are presented. The results will show the degree of need as expressed by the mothers for the different items under the five categories.

Table 5.14

Mothers' Needs Questionnaire

Category (I): Information about diagnosis, prognosis & treatment

(Items: 1,2,3,12,14) (n=27)

Questions	% Degree of Need		
	Severe	Moderate	None
Item 1: More information about child's problem	48%	44%	7%
Item 2: More information about child's development	52%	37%	11%
Item 3: More information about child's social/emotional behavior	67%	19%	15%
Item12: Instructions on how to deal with my problem	22%	48%	30%
Item 14: Teach me how to have my children better relate to their special needs sibling	22%	37%	41%

Table 5.14 describes category (I) of the Mothers' Needs Questionnaire. The degree of need as expressed by the mothers helped identify the significance of these services to the mothers. Services under items 1, 2 and 3 rated the highest in significance to the mothers in this study compared to the services under items 12 and 14, to which mothers expressed moderate need. From the

results under this category it can be interpreted that most mothers needed more information about their child's development and behaviors.

Table 5.15

Mothers' Needs Questionnaire

Category (II): Type of intervention for child/family (Items: 4,5,10,16,17)

(n=27)

Questions	% Degree of Need		
	Severe	Moderate	None
Item 4: More center-based services for child	41%	37%	22%
Item 5: More home based services	37%	52%	11%
Item 10: Better medical services for child	26%	44%	30%
Item 16: Provide better technical aids	15%	30%	56%
Item 17: Get in touch with other centers that may help me and my child	48%	33%	19%

Table 5.15 describes category (II) under the Mothers' Needs Questionnaire. The degree of need as expressed by the mothers helped identify the significance of these services to the mothers. Services under items 4, and 17 rated the highest in significance compared to services under items 5 and 10 to which most mothers expressed moderate need. For item 16, most mothers expressed no need. From the results under this category it can be interpreted that most mothers expressed the need for getting in touch with other special facilities, more center-based and home based services for their child. On the other hand, their need for medical services and technical aids for their child was of less importance.

Table 5.16

Mothers' Needs Questionnaire

Category (III): Professional support from agency/center

(Items: 6,7,8,19,21,23)

(n=27)

Questions	% Degree of Need		
	Severe	Moderate	None
Item 6: Solving problem with my own family	7%	19%	74%
Item 7: Solving problem with spouse	0%	7%	93%
Item 8: Solving problem with my children	4%	22%	74%
Item 19: To help me better organize my time and responsibilities	19%	37%	44%
Item 21: To better help and understand my child	37%	56%	7%
Item 23: How to involve the rest of the family with our special needs child	30%	44%	26%

Table 5.16 describes category (III) under the Mothers' Needs Questionnaire. The degree of need as expressed by the mothers helped to identify the significance of these services to the mothers. Services under items 21 rated the highest in significance compared to services under items 19, and 23 to which most mothers claimed moderate need. For items 6,7,8 most mothers expressed no need. Results indicate that most mothers require more professional services and recommendations about other services available to their child.

Table 5.17

Mothers' Needs Questionnaire
 Category (IV): Social support from family/friend
 (Items: 9,11,13,18,20)
 (n=27)

Questions	% Degree of Need		
	Severe	Moderate	None
Item 9: Assistance in raising my children	19%	52%	30%
Item 11: Get in touch with families of special needs children	11%	41%	48%
Item 13: Meet a person who can help me relate better with my problems	15%	37%	48%
Item 18: To find time for myself	26%	33%	41%
Item 20: To spend more time with my special needs child	11%	48%	41%

Table 5.17 describes category (IV) under the Mothers' Needs Questionnaire. The degree of need as expressed by the mothers helped to identify the significance of these services to the mothers. Results indicate that for the mothers in the sample, social support services was not a priority, as results indicate higher percentages of no need for services under this category. However, 52% of the mothers in the sample expressed moderate need for assistance in raising their child.

Table 5.18**Mothers' Needs Questionnaire**

Category (V): Materialistic Support for the family (Items:15,22)

(n=27)

Questions	% Degree of Need		
	Severe	Moderate	None
Item 15: Assistance with finance	11%	33%	56%
Item22: Solve my transportation problem	22%	26%	52%

Table 5.18 describes category (V) under the Mothers' Needs Questionnaire. The degree of need as expressed by the mothers helped to identify the significance of these services to the mothers. Results indicate that services under this category were of limited importance to the mothers in the sample.

5.1.3 The Questionnaire for Early Intervention Programs:

The Questionnaire for Early Intervention Programs was designed to identify the quality and quantity of services offered by the different centres that have responded to the questionnaire. The questionnaire consisted of four main sections: *general information about the centre, specific information about the centre, description of the team, and means of communication with families.* The following tables will present the results of the four main sections in the Questionnaire for Early Intervention Programs

Table 5.19

Questionnaire for Early Intervention Programs
 General information about the centres
 Type of centre

General information about the centres	
Type of centre	% of centres (n=10)
Rehabilitation	90%
Medical	30%
Social	100%
Education	60%

Results in Table 5.19 show that all the ten centres provide social services, and 90% provide rehabilitation services. Education services are provided by 60% of the centres, while only 30% of the centres provide medical services.

Table 5.20

Questionnaire for Early Intervention Programs
 General information about the centres
 Age of Children

General information about the centres	
Age of Children	% of centres (n=10)
Birth–1 years	30%
1-2 years	60%
2-3 years	60%
Above three years	70%

Results in Table 5.20 show that 70% of the centres provide early intervention services for children above three years old, and 60% provide such services for children 1-3 years old. While only 30% provide early intervention services for infants birth-1 year old.

Table 5.21

Questionnaire for Early Intervention Programs

Specific information about the services

Type of service

Specific information about the centres	
Type of service	% of centres (n=10)
Home-based	90%
Centre-based	80%
Combination	80%

Results in Table 5.21 show that 90% of the centres provide home-based services, and 80% provide centre-based services. While 80% of the centres provide a combination of both home-based and centre-based services.

Table 5.22

Questionnaire for Early Intervention Programs
 Specific information about the services
 Technique of service

Specific information about the centres	
Technique of service	% of centres (n=10)
Individual sessions	80%
Group sessions	70%
Combination	70%

Results in Table 5.22 show that 80% of centres provide individual sessions, 70% provide group sessions, and 70% provide a combination of both individual and group sessions.

Table 5.23

Questionnaire for Early Intervention Programs
 Description of Rehabilitation Team
 Team members

Description of Rehabilitation Team	
Team member	% of centres (n=10)
Physical therapist	60%
Social worker	70%
Psychologist	60%
Teacher	50%
Speech therapist	50%
Parent	40%

Results in Table 5.23 show that 70% of the centres have social workers in their rehabilitation team, 60% have physical therapists and psychologists, 50% have teachers and speech therapists, and only 40% involve parents.

Table 5.24

Questionnaire for Early Intervention Programs
 Description of Rehabilitation Team
 Team approach

Description of Rehabilitation Team	
Team approach	% of centres (n=10)
Disciplinary	10%
Trans-disciplinary	50%
Multidisciplinary	40%

Results in Table 5.24 show that only one centre provides services through a disciplinary approach, 50% use a trans-disciplinary team approach, and 40% use a multidisciplinary team approach.

Table 5.25

Questionnaire for Early Intervention Programs
Means of communication with family

Means of communication with family	% of centres (n=10)
Monthly report	50%
Individualized family service plans	10%
Meetings with family	70%
Written documentation	70%
Phone calls	50%

Results in Table 5.25 shows that 70% of the centres communicate with the families through meetings and written documentation, while 50% communicate through monthly reports and phone calls, and only one centre uses Individualized Family Service Plans.

5.2 Analysis and Interpretation of results:

5.2.1 Interpretation of the results from the Family Background Information questionnaire

Results from the Family Background Information questionnaire indicate that all mothers in this study were married. With regard to age it was found that 48% of the mothers were above 35 years old, and 52% of the fathers were above 40 years old. Therefore it could be concluded that both parents are of a mature and responsible age. With regard to the educational level, there were

an equal number of fathers and mothers with high school education, 44% of fathers and 44% of mothers have high school. This means that the majority of the parents both have high school education level.

The number of employed fathers is much higher than that of employed mothers. This indicates that fathers are the primary income providers for the family, which is in accordance with the cultural norms of the Islamic society. In addition, results indicate that 56% of fathers and 22% of the mothers have a monthly salary in the range of more than 5000SR. The 22% of mothers who earn more than 5000SR reflect the percentage of working mothers. While the 78% of mothers earning no salary are non-working mothers. This implies that mothers in the sample who are working receive high salaries.

With regard to the type of residence, 63% of the families, which is the majority of the sample, live in a rented residence. This is also an indication of the family's socio-economic level. The majority of the families live on their own. The new trend in the Saudi culture is single-family units, where more families prefer independence and living on their own rather than the extended family system encouraged by Islam. The results in the study show that 70% of the families live alone.

The size of the family indicates that 30% of the families in the sample have more than six children. The average number of children in a middle class family in the Saudi culture are four to five children, as mentioned in the annual population statistics in the Kingdom of Saudi Arabia. Results indicate that most of the families in the sample have one special needs child. The last variable gives information about when the impairment of the child was first identified. Results indicate that most families found out about their child's disability after their child's birth.

5.2.2 Interpretation of the results from the Mothers' Needs Questionnaire

The following section will discuss the interpretation of the results from the mothers needs questionnaire based on each category. For each category,

some of the most important findings will be highlighted and interpreted. For Category I: *Information about diagnosis prognosis and treatment*, results from Table 5.13 indicate that an average of 44% of the mothers expressed a severe need for more information about the child's problem, development, and social/emotional behavior. Results from Table 5.12 indicate that specifically 67% of the mothers in the sample indicated a severe need for information about the social/emotional behavior of the child. The need for this service was the highest for the mothers in the sample. It may be speculated that these findings are attributable to the paucity of resources available to the mothers sampled.

It is quite apparent that the mothers in the sample lack information about impairment and issues related to it. Many factors can be the cause for this very high need of the mothers. Firstly, the fact that there is limited Arabic books or articles about the subject of impairment. Secondly, society at large is still not completely accepting of impairment. Thirdly, unfortunately some physicians do not give enough information to the mothers or parents about their child's condition. Maybe also because they themselves lack the specific information about the impairments. In addition, the inavailability of public information agencies which provide resources and information for families and parents of special needs children may have a negative impact on the situation. Accordingly it is evident that the currently available programs do not meet the mothers' needs.

With regard to category II: *type of intervention for child and family*, the results in Table 5.13 indicate that an average of 30% of the mothers in the sample expressed a severe need for more services and interventions. Similarly, an average of 30% of the mothers indicated no need for these type of services. The results from Table 5.12 indicate that 41% and 37% of the mothers expressed severe need for centre and home-based services respectively. This result signifies the need for both types of services.

The fact that the mothers in the sample are currently associated with an early intervention program may cast a certain degree of bias on their expression of

needs for either of the services. Consequently, it may be inappropriate to extrapolate these findings on mothers who have not had access to such services. Mothers' expressed need for more centre and home-based services may imply that they are satisfied and see the benefit of these services for their child. The results also showed that mothers expressed the need for home-based services, because they probably feel more comfortable in their own home environment.

Most mothers normally strive to find the best and most appropriate placement for their child. The fact that there is a shortage and limitation of services for special needs children in the Kingdom of Saudi Arabia signifies the importance of the different types of services to the mothers.

The fact that an average of 30% of the mothers in the sample also expressed no need for services, may imply that because the mothers in the sample were already receiving some type of service they did not feel the need for more of any service. Also they could be satisfied with the currently provided services, therefore their expression of need was affected.

The results in Table 5.12 showed that 56% of the mothers in the sample expressed no need for better technical aids, which is one of the services under category II. This could be due to their limited awareness of the type of technical aid most suitable to the child's impairment. Or the fact that some times certain technical aids are not readily available in the market. If physicians and/or therapists where to provide these services adequately, chances are the mothers awareness for this need will increase.

With regard to category III: *professional support from agency and centre*, the results in Table 5.13 indicate that an average of 22% of the mothers in the sample expressed a severe need for more professional support. On the other hand, an average of 48% of the mothers indicated no need for these type of services. Results in Table 5.12 indicated that 74% of mothers stated that they did not need help or support from the centres in solving problems with their family, 93% needed no support in solving problems with spouse, and/or 74%

needed no support in solving problems with their other children. These results could be due to religious and cultural norm, where familial issues are considered private matters that are confidential and encouraged to be resolved within the family.

In the Saudi culture, some parents are not aware of the importance of the need for discussing their child's case with a professional in an objective manner. This lack of awareness may effect the benefit that the child and family may receive from the early intervention services and also it effects the expression of mother's need for these services. Furthermore, in the Saudi culture, it is not customary that couples go for marriage counseling or any professional assistance in solving marriage and social problems. Usually if couples have marital problems they try to solve them on their own, or seek advice from the elders of the family. Therefore, professional support services need to be improved at this particular centre, The Help Centre, to allow for better collaboration with families. Furthermore, some adaptations to the professional support services should be applied to ensure that these services are adequate with the actual needs of the mothers and culturally appropriate.

With regard to category IV: *social support from family and friend*;, the results in Table 5.13 indicate that an average of 19% of the mothers in the sample expressed a severe need for more social support. On the other hand, an average of 41% of the mothers indicated no need for these type of services. Results in Table 5.12 helped show that 26% of the mothers expressed a severe need for finding time for themselves, is a clear indication that the mothers are frustrated and overwhelmed although they do not want to admit it. But once they are asked or they are encouraged to express their feelings, then they would clearly state that they would really appreciate social help and support. Unfortunately social inhibitions play a major factor on the expression of needs of the mothers of special needs children.

Lastly mothers responses for help in spending more time with their special needs child, is again another indication that the mothers are in general abiding to the strict social codes of society, in order to show their strength to

others around them. But once the mothers are encouraged to express their actual needs, it is quite definite that their expression of needs will be changed. Up to this point it seems quite clear that the roles of the professional in an early intervention programs in Saudi Arabia are very important. Parent-professional collaborations are very much in need, in order to help reduce the pressures off the mothers and also the families of special needs children.

The fact that 41% of the mothers indicated no need for social support services could be due to cultural and social pressures and upbringing that influence the mother's expression of the need for a family member or a friend to provide help and support. In the Saudi culture, most families take pride in not showing their problems to even their immediate family or friends. This could be attributed to social inhibition characteristic of the Saudi culture. The cultural and societal pressures subjected on the family, usually influence the mother's expressed needs.

Therefore, mothers may appreciate social or professional support once these social pressures are eased. Some mothers also indicated a need for social support in getting in touch with other families or a friend to share their problems. But it is still quite apparent that social inhibitions are effecting the expressed responses of the mothers. Presumably they would like and may even appreciate these social services, yet society indirectly inflicts its codes and therefore inhibits the benefits to be gained out of these services.

With regard to category V: *Materialistic support for the family*., the results in Table 5.13 indicate that an average of 15% of the mothers in the sample expressed a severe need for more social support. On the other hand, an average of 56% of the mothers indicated no need for these type of services. Results in Table 5.12 helped show that 56% of the mothers expressed no need for assistance with finance, and 52% expressed no need for solving transportation problems. This could be due to the fact that in the Saudi culture people prefer not to talk or discuss their financial situation with anyone, and consider it a very personal issue. Also the government, through

the Ministry of Labor and Social Affairs pays families with a special needs child annual subsidies as assistance and support.

The reason why a higher percentage of mothers expressed no need for these services could be due to the fact that the mothers in the study are from the middle and upper-middle class sector of the Saudi population, to whom finance is not a major concern. Presumably if the sample was with low income families, the expressed needs for this service would be different.

Similarly, 52% of the mothers' in the sample expressed no need for assistance with transportation. This could be due to the fact that most families in the sample are financially comfortable and have adapted to their situation. There are many variables that have a direct effect on the expression of need for this service. The income of the family usually, has an enormous effect on the need for this service. Families with low income usually have serious transportation problems. It is of great relevance to mention that in Saudi Arabia, women are not allowed to drive. The husband, older son, or driver in any family does the driving. Which puts tremendous pressures on low-income families. Firstly the husband with all his other commitments is the one responsible for the transportation of his family, or he has to provide a private driver. Otherwise, the mother has to rely on public transportation.

In general, analysis of the results from the Mothers' Needs Questionnaire indicated that the mothers in the samples expressed severe need for services in category I, specifically with more information about the child's impairment, development and social/emotional behaviour. In addition, mothers in the sample expressed a severe need for services in category II particularly, intervention services through centre and home-based services. On the other hand, services provided in category III which is professional support from agency was of less significance to the mothers in the sample as reflected by the higher frequency of no need responses. Similarly, mothers need for services under category IV, which is social support from family and friends, was also of less significance to the mothers in the sample as reflected by the higher frequency of no need responses. Lastly, services under category V,

which is materialistic support for the family, was of limited significance to the mothers of the sample due to the higher frequency of no need responses expressed by the mothers.

In the following section, Table 5.26 shows the results of the relationship between the five most relevant variables of socio-economic background information of the mothers and the categories of need. It should be noted, that for each variable, the total of all responses in the severe, moderate and no need columns will amount to 100% when all the options for each variable are added. Some rounding errors may be present since the responses were rounded to the nearest whole number.

Family background information variables	Categories of Need														
	Information I			Intervention Services II			Professional Support III			Social Support IV			Materialistic Support V		
	Severe Need	Moderate Need	No Need	Severe Need	Moderate Need	No Need	Severe Need	Moderate Need	No Need	Severe Need	Moderate Need	No Need	Severe Need	Moderate Need	No Need
Mother's age															
18-25 years	7%	4%	0%	4%	4%	4%	0%	7%	4%	4%	4%	4%	4%	7%	0%
26-35 years	22%	15%	4%	22%	7%	11%	7%	22%	11%	11%	22%	7%	4%	19%	19%
above 35 years	19%	19%	11%	26%	11%	11%	7%	22%	19%	7%	30%	11%	4%	11%	33%
Mother's educational level															
illiterate	11%	7%	0%	7%	7%	4%	4%	11%	4%	7%	7%	4%	4%	11%	4%
intermediate	0%	11%	0%	0%	7%	4%	0%	7%	4%	0%	7%	4%	0%	7%	4%
high school	11%	26%	7%	19%	15%	11%	4%	22%	19%	0%	30%	15%	0%	19%	22%
undergraduate	11%	7%	0%	11%	4%	4%	4%	11%	4%	4%	15%	0%	4%	7%	7%
graduate	0%	7%	0%	7%	0%	0%	4%	4%	0%	0%	4%	4%	0%	4%	4%
Mother's employment status															
employed	11%	11%	0%	11%	7%	4%	4%	11%	7%	0%	19%	4%	4%	11%	7%
unemployed	33%	30%	15%	26%	41%	11%	4%	44%	30%	4%	37%	37%	11%	30%	41%
Mother's monthly salary															
less than 2000SR	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
less than 5000SR	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
more than 5000SR	11%	11%	0%	11%	11%	0%	4%	15%	4%	0%	19%	4%	0%	11%	11%
Size of family															
1 child	7%	4%	0%	7%	4%	0%	0%	11%	0%	0%	4%	7%	4%	4%	4%
2 children	4%	7%	0%	4%	4%	4%	0%	7%	4%	0%	4%	7%	4%	4%	4%
3 children	4%	7%	0%	0%	11%	0%	0%	4%	7%	0%	0%	11%	0%	7%	4%
4 children	4%	11%	0%	0%	15%	0%	4%	4%	7%	0%	7%	7%	7%	4%	4%
5 children	15%	7%	0%	11%	11%	0%	7%	11%	4%	0%	19%	4%	0%	15%	7%
more than 5 children	15%	11%	4%	15%	11%	4%	4%	22%	4%	0%	15%	15%	4%	11%	15%

Table 5.26: The relationship between the five most relevant variables of socioeconomic background information of the mothers and the categories of need. (n=27)

5.2.3 Interpretation of the relationship between the most relevant socio-economic background variables of the mothers and the categories of needs

The data gathered about the socio-economic background of the mothers and the categories of needs were compared to identify the relationship between them. The variables chosen in Table 5.26 were those considered as directly affecting the expression of needs of the mothers and therefore were regarded as the most relevant variables in the Family Background Information questionnaire.

The mother's age, educational level, employment status, monthly salary, and the number of children in the family were considered the most relevant socio-economic variables that could influence mothers' perception of certain needs. From the results in Table 5.2 it is clear that 41% of mothers in the study were in the age range of 26-35 years old, and 41% mothers were in the above 35 years age range. When comparing these results with the results compiled in Table 5.26, it is apparent that mothers in these age ranges expressed 22% and 19% respectively, for severe need of information about the child's impairment. Therefore, it may be considered that although these percentages are considered low, however, these were the highest among the different age groups of mothers who expressed severe need for more information about their child's impairment, development, and behavior. It may be speculated that perhaps because these mothers were educated and experienced enough to realize that they are lacking information about their child's condition.

On the other hand, Table 5.26 shows that only 7% of the mothers in the age group of 18-25 years expressed severe need. Which indicates that for the younger sample of mothers in the study a lower percentage of mothers expressed a severe need for more information. This may be attributable to their lack of experience or their sense of independence and enthusiasm. Therefore, there is a relationship between the age of the mother and the degree of her expression of the need for services offered under category I.

With regard to the educational background of the mothers in the sample, the results in Table 5.5 indicate that 44% of mothers in the study have a high school degree, and 19% of mothers have an undergraduate degree. When comparing these results with the results compiled in Table 5.26, it is apparent that mothers in both these educational levels expressed 11% for severe need of information about the child's impairment. Therefore, it can be assumed that mothers in these educational levels expressed severe need for more information about their child's impairment, development, and behavior perhaps because they were educated and experienced enough to realize that they are lacking information about their child's condition. Which indicates that for the sample of mothers in the study, there is a relationship between the educational level and the mothers expression of need for more information about their child's impairment.

Similarly, when comparing the same age groups and educational levels of the mothers with the expression of degree of need for services under category II, results from Table 5.26 indicated that 22% of mothers in the age range of 26-35 years and 26% of the mothers in the age range of above 35 years old expressed severe need for intervention and services, where as 19% of mothers with high school education expressed severe need for these types of services. This maybe due to the fact that mothers in these age groups are older and perhaps having more experience. Perhaps the older mothers realize the need for centres or agencies that provide special services for the different types of special needs children. These mothers show a great deal of keenness towards finding the appropriate placement for the impaired child.

Presumably, the older and more educated the mother, the more experienced and knowledgeable she becomes, and therefore her level of awareness for the type of service for her special needs child becomes more concrete. These results indicate a relationship between the mothers age and educational level and the degree of expressed need for services and intervention.

When comparing results in Table 5.26 between the mothers age with their expressed need for professional, social, and materialistic support (categories

III, IV and V), results indicate a relatively limited significant relationship between this variable and the degree of expression of need for services under these three categories. The expressed responses of mothers in the age range of above 26 years was 7% severe need for professional support, 7-11% severe need for social support and 4% severe need for materialistic support. On the other hand, the expression of no need for these services ranged between 11-19% no need for professional support, 7-11% no need for social support and 19-33% no need for materialistic support for the same age group. Which indicates that there is no relevant relationship demonstrated between these variables.

Results from Table 5.6 indicated that 78% of the mothers in the sample were unemployed, and 22% were employed. Results from Table 5.26 showed that 33% of the mothers who were unemployed expressed severe need for information and services of intervention, while 11% of the mothers who were employed expressed severe need. It may be speculated that the unemployed mother may have more time available to invest in the care of her special needs child. While the employed mother may have very limited time available due to her primary responsibility of taking care of her family in addition to the employment responsibilities. Therefore, there seems to be a clear relationship between the expressed severe need for information and type of services and intervention (category I and II).

Results from Table 5.26 also indicated that for the majority of the mothers regardless of their employment status, professional, social and materialistic support was of less significance, because they either expressed moderate or no need for the different services under these categories. The fact that the mothers expressed no need for professional support, could be due to the lack of effective communication between the professional and the mother.

Results from Table 5.26 showed no relevant relationship between mother's employment status and the remaining two categories of social and materialistic support. Though socially the trend is now more towards smaller family units, and independence from the extended family, more families are

moving away from involving families and friends in solving their problems. This is probably why social support was not of high significance to the sample. Here again cultural factors can influence the expressed needs of the mothers. Although the results indicate that materialistic support is of less significance to the mothers in this study. This could be due to the fact that firstly the sample was small. Secondly, as the mothers were already associated with a private centre, they did not feel the need for more materialistic support.

With regard to the relationship between the mothers income level and the different services under the various categories, the results as shown in Table 5.7 indicate that 22% of the mothers have a monthly salary in the range of more than 5000 Saudi Riyals (SR). The 22% of mothers who earn more than 5000SR reflect the percentage of working mothers. While the 78% of mothers earning no salary are non-working mothers. Results from Table 5.26 indicate that only 11% of the mothers expressed severe need for both the information and type of intervention services. This result may be due to the fact that these mothers are financially comfortable that they feel they require only information and intervention services but do not feel a severe need for materialistic, professional and social support. Therefore, it appears that the relationship between the mothers' income level and the services under the categories of need is very limited.

The size of the family is another relevant factor that influences the expectations and needs of the mothers. Results from table 5.4 indicate that 52% of the families in the sample have five or more children. From Table 5.26 it can be seen that by combining the responses of the the two groups of respondents with five children and more than five children that 30% of the mothers in this combined group expressed a severe need for information (category I). Similarly, 26% of the mothers in the same combined group expressed a severe need for the different types of intervention (category II). These results appear to be expected since mothers with a large number of children would have more responsibilities and would presumably need as much information and services that they could get. On the other hand, only 4% of this combined group of mothers expressed severe needs for

materialistic and social support (category IV and V). This result would appear to be quite contrary to what would be expected on the basis that mothers with a large number of children would need as much support as they could get.

In summary, the results indicate that the majority of the mothers expressed severe and moderate need for information about their child's impairment, diagnosis, prognosis and treatment. They expressed moderate need for support from professionals in teaching them how to interact with their special needs child and how to involve the rest of the family with this special child. Some of the mothers expressed moderate need for either social or materialistic support, but the majority expressed no need for these services. It was found that unemployed mothers in the above 35 years age range, with high school education, expressed severe need for information about their child's condition and problems. The size of the family was another important variable that affected the mothers needs.

Therefore, it may be concluded from the Family Background Information Questionnaire, that some of the variables such as the mother's age, level of education, and employment status have a significant effect on the expressed needs of the mothers in the sample.

5.2.4 Interpretation of the results from the Early Intervention Program Questionnaire

Results in Table 5.19 shows that 90% of the ten centres provide rehabilitation services, 100% social services, while 60% provide educational services. The shortage in the educational services provided in the early intervention programs does not address one of the main objectives of Early Intervention Programs. Their objective is to educate parents about their children's impairment and to assist their children in their social, emotional, and physical growth. Thus these shortages may influence the actual benefits what could be gained. The latest research is indicating that Early Intervention Services should start with the family to help them first so they consequently help their child.

This study indicate that the majority of centres do provide some type of information and knowledge to the mothers about the impairment and issues related to it. However these services is not adeqaute for the families. Table 5.20 indicates that 30% of the centres in the sample provide early intervention services for young children starting from birth to one years old through either home-based or centre-based services. However, this could be an indication of a real shortage to serve this age group and their families.

Table 5.21 indicates that early intervention programs in the Kingdom of Saudi Arabia and in the Gulf are providing both home-based and centre-based services for young children and their families. Table 5.22 indicates that these centres are applying group and individual sessions for their service delivery. This approach is similar to the most current approaches used in equivilant centres in the Western Region.

Results from Table 5.23 show that 70% of the centres have social workers in their rehabilitation team. There were 60% of the centres which have physical therapists and psychologists, 50% have teachers and speech therapists. These results indicate that social workers and other therapists should be the ones available to provide the counselling and advice needed by the mothers. These results clearly show that a shortage of professional support services exist. Firstly, some centres do not have key personnel such as social workers or early childhood specialists to help implement the program. This lack is very critical with regard to the provision of standard care for the children in these centres. Furthermore, the fact that only 40% of the surveyed centres do not involve the parents in the rehabilitation team is of paramount importance. It is obvious that these centres require fundemental changes in their approach in order to emphasize the parents role to conform with the most recent trends in early intervention service programs.

Results in Table 5.25 show that 70% of the centres communicate with the families through meetings and written documentation, while 50% communicate through monthly reports and phone calls. These results indicate that most of the centres have well-established means of communication with

the families. Although the mothers expressed moderate need for professional support, again it could be assumed that staff at the centres especially social workers and psychologists need to improve on their rapport and communication skills with the mothers to encourage them to be more active and involved. An interesting result from Table 5.25 was that only 10% of the centres (The Help Centre) implements the use of Individualized Family Service Plan (IFSP) in providing their services. This result does not conform with the currently recommended trend of family involvement in early intervention programs particularly in the United States.

Since the study was conducted at The Help Centre, the researcher aimed at establishing a relationship between the actual services offered by the centre and the needs that were expressed by the mothers in the Mothers' Needs Questionnaire. Collected data showed that the services offered by the early intervention program at The Help Centre is provided through home-based and centre-based services. Children receive services through daily, and/or weekly individual and group sessions. A rehabilitation team that works within a trans-disciplinary team approach offers the services. The staff communicates with the families through meetings held during home visits and/or centre services. Written documentation are also administered by the staff through the writing of the Individualized Family Service Plan (IFSP) to help in facilitating communication between the team members and the family according to the needs desired by the family. The social worker, the psychologist, and the director of the early intervention program provide all the information and counselling sessions to the families according to their individualized needs.

The data collected about the early intervention services provided by The Help Centre, indicated that the services offered by the centre matched in general most of the needs expressed by the mothers. The experiences gained by the staff at The Help Centre through the implementation of the early intervention program over the last five years, may be a model to follow for other centres in the Kingdom of Saudi Arabia. But adaptations to the early intervention program should be a major factor to consider by other centres if they want to

effectively utilize the experience of The Help Centre, depending on the population served and the needs expressed by the mothers in any program.

In general, analysis of the results from the Questionnaire for Early Intervention Programs indicate that the majority of these centres offer the basic services needed in an early intervention program. As far as the effect of the type of impairment of the child on the benefits gained from participation in an early intervention program, results from this study can not be generalized due to the fact that the sample was small. Although the children of the mothers in the sample were intellectually and physically impaired, Table 4.1 shows that the numbers of the children with these two impairments is extremely small. Therefore, the significance of the type of impairment of the child can not be established, as the results will be biased. The review of the different impairments presented in chapter 2, demonstrates that every impairment has its own characteristic. Therefore, the child's impairment has an effect on the benefits gained from participation in an early intervention program.

5.2.5 Summary of the interpretations of the results

In summary, the results of this study indicate that the majority of the mothers expressed severe and moderate need for information about their child's impairment, diagnosis, prognosis, and treatment. The mothers needed information about the child's development, and social-emotional behavior. Mothers also expressed severe and moderate need for more services and intervention programs for their child. They expressed moderate need for support from professionals in teaching them how to interact with their special needs child and how to involve the rest of the family with this special child. Some of the mothers expressed moderate need for either social or materialistic support, but the majority expressed no need for these services.

Results from the study also established a relationship between some of the socio-economic background variables and the five different categories of needs. It was found that unemployed mothers in the above 35 years age range, with high school education, expressed severe need for information

about their child's condition and problems relating to it. The size of the family was another important variable that affected the mothers needs.

With regards to the results from the surveyed centres offering early intervention services, it can be summarized that most of the centres are providing the essential services required in order to meet the basic needs of the special needs child and the family. In particular, The Help Centre demonstrated an encompassing model for an early intervention program. However, any future program utilizing this centre as a model should take into consideration the child's impairment, the needs of the mothers and/or family and the different cultural variables.

CHAPTER 6

Summary, Findings and Recommendations of Research Project

6.1 *Summary*

The present study aimed at determining the significance of early intervention services for mothers of special need children with intellectual and physical impairments. The study also aimed to identify the need for establishing more early intervention centres, as well as effectively utilizing the services of the available centres, to try and meet the needs of the mothers of special needs children.

In chapter 1, an overview of the history and status of education and special education and services for special needs children in the Kingdom of Saudi Arabia and the United States of America was given. In addition, the aims, goals and the formulation of the research problem in this study were established. In chapter 2, an explanation and discussion of the different types of exceptionalities in general with focus on intellectual and physical impairments was presented.

Chapter 3 provides a discussion of the subject of early intervention, its history, current trends, rationale and objectives. A brief discussion of early intervention programs in the Kingdom of Saudi Arabia and the Gulf countries is drawn. A comparison between the different types of early intervention programs was also discussed. Service coordination and variables affecting the child's development were discussed in reference to the relevance and provision of early intervention services.

Chapter 4 covered the methodology and procedure of implementing the study. The methods used in the study to collect and gather data about the sample in the study, and the current programs offering services for special needs children were described. Finally, the questionnaires that were designed and formulated to help in processing and interpreting the results in order to find out the relationship between the formulated problems stated in the study was discussed. Chapter 5 described the experimental design of the study. Reporting of the results and findings of the questionnaires are set in tables and graphs. Discussion of the interpretation and analysis of the accumulated data from the findings are presented in this chapter. In addition, a summary of the findings of the current study is discussed. Finally, a set of recommendations for future studies is given.

This study has helped to establish the definite need for early intervention programs in the Kingdom of Saudi Arabia. The expressed needs of the mothers in the sample also helped identify the most relevant and important needs of mothers of intellectually and physically impaired children. The knowledge about the family's socio-economic background has helped in identifying some variables that have the most effect on the mothers expressed needs for early intervention services. The data collected from the surveyed centres that provide early intervention services were helped in realizing where the current services are lacking and where improvement was essential to suit the actual needs of the mothers.

The knowledge of the causes and characteristics of the different types of impairments has helped the researcher to realize that programs should adapt their services to suit the child's impairment and needs as well as the needs of their families. The responses from the current early intervention programs in the Kingdom of Saudi Arabia and the Gulf helped in identifying the already provided services. Accordingly, new centres can learn from the experiences of these former centres and adapt their services to suit the needs of the children and their families, and give special considerations to the impairment of the child.

6.2 Research findings

6.2.1 Findings from the Family Background Information questionnaire

In general, the findings from the Family Background Information questionnaire have shown that there are certain socio-economic variables that have direct influence on the expression of needs by the mothers. These variables are the mothers' age, educational level, employment status, monthly income and the size of the family, which may effect the outcome and benefit of the child and his mother or family from the early intervention services provided.

6.2.2 Findings from the Mothers' Needs Questionnaire

The data gathered from the Mothers' Needs Questionnaire demonstrated that the priority need for the mothers in the sample was in finding information about the child's impairment, development, and social-emotional behavior. It is quite apparent that the mothers in the sample have expressed different degrees of needs for the different types of services provided in the early intervention programs with which they are associated. The findings from this study indicated that there are several social, medical, financial, professional, and counseling services needed by the mothers in the sample. Some of these services include, more support and assistance to mothers in raising their children, and how to involve the rest of the family with the special needs child. Also, how to find out about other available centres with services for special needs children and how to better manage time and organize the mothers responsibilities. Furthermore, the mothers in the sample indicated their need for more medical, and intervention services.

Also from the findings of this study and the expressed needs of the mothers it is very obvious that there is significance for early intervention programs for special needs children and their families. There is a desperate need for establishing more early intervention programs in the different regions of the country in order to meet the needs of the families of young special needs

children. The research findings of the mothers' needs indicate the definite need for early intervention programs, whether through home-based or centre-based services. However, centre-based services seem to be a much more desirable choice to the mothers in the sample.

6.2.3 Findings of the relationship between the most relevant socio-economic background of the mothers and the categories of needs

Findings from the data gathered about the socio-economic background of the mothers and the categories of needs helped to identify the relationship between some of the most relevant socio-economic variables that influence the expressed needs of the mothers, i.e. the categories of needs. To summarize, the research findings indicated a significant relationship between the mother's age, educational level, employment status, income, and size of the family and the need for services under category (I) information about the child's impairment; category (II) type of intervention; and category (III) professional support. Whilst there was limited significance in the relationship between the above mentioned socio-economic variables and some of the services listed under category (IV) social support, and category (V) materialistic support.

6.2.4 Findings of the results from the Early Intervention Program Questionnaire

Findings from the data gathered from the Early Intervention Program Questionnaire showed that most of the ten centres in the Kingdom of Saudi Arabia and the Gulf that have responded to the questionnaire provide social, rehabilitation, and educational services. Thus, the majority of the centres appear to provide the essential early intervention services required by the mothers or family to suit the needs of the child. However, improvement in the different services should be done, especially in the services to which mothers have expressed severe need such as information, type of service, and professional support categories.

6.3 *Conclusions*

This study is limited in scope and in the numbers of participants, and thus its results should be considered with caution. Generalizations regarding the findings from the present study are influenced by the limitations mentioned in the different sections of the study. Because of the limited size of the sample and the selection process of the sample, the results can not be considered representative of the entire population of families of children with intellectual and physical impairments in the Kingdom of Saudi Arabia. This study has provided evidence that certain characteristics of the mother (i.e., socio-economic background) may influence the expressed needs. Therefore, professionals need to identify mothers' needs and to respond in a manner that ensures optimal mother and family responses according to the mothers' expressed concerns and/or needs, and with regard to the family characteristics and cultural dynamics.

Also from the research findings it was quite apparent that the expressed needs of the mothers were inhibited and influenced by the social codes of the Saudi society. Professionals in an early intervention program seem to be undermining their roles for providing assistance and support to the mothers and families of special needs children because the limited collaboration among professionals. The findings also showed that the parent-professional collaboration is not up to the optimal standard to suit the actual needs of the mothers in the sample. Therefore, a lot of effort should be stressed in providing more positive input from the professionals, to suit the needs of the mothers in order to ensure the desired benefit for both the special needs child and the family from the early intervention program.

In conclusion, this study has demonstrated that though mothers in the sample were receiving early intervention services they still expressed various degrees of needs for more information, social, medical, and financial services, professional assistance and support, and service delivery methods that are appropriate to the child and family needs.

6.4 Recommendations

Based on the findings of the study, the researcher recommends the following:

6.4.1 For further research

- 1) To conduct a similar study with a larger nationwide sample, to allow for a better representation of the mothers in The Kingdom of Saudi Arabia.
- 2) To replicate this study with the use of one questionnaire only that specifies both the needs of the mothers and their opinion of the services they are receiving, and to compare it to the needs of mothers who are not receiving any services. This will allow for establishing the significance of the type of service and the actual needs of the mothers from the service.
- 3) Expand this study to address other related issues such as the types of services provided, parental involvement, the types of impairment, cultural and religious beliefs. Thus more factors can be studied to identify the effects of these variables on the types of services to be offered.

6.4.2 For medical referrals to early intervention programs

- 1) It is crucial to stress the importance of the awareness of professionals in the medical field, especially physicians, to early referrals of newborn infants and their families for early intervention services.
- 2) Hospitals and Primary Care Units should be affiliated with the different centres/agencies offering early intervention programs, to help in the proper channeling and referral process of the families of special needs children to these places.

6.4.3 For establishing an Early Intervention Bureau

1. It is crucial to establish an Early Intervention Bureau that is a central unit of referral and connection between the different hospitals in the different regions of the country and the early intervention centres. This

bureau would help in the referral process of families of special needs children to the appropriate placement for the child.

6.4.4 For college preparation programs

1. Different courses for teachers in the special education field, as well as in other related fields such as child development, medicine, education, social studies, psychology, need to incorporate coursework and practical experience that enables the students to identify and deal with very young infants and their families.

6.4.5 For in-service training programs

- 1) The department of special education at the university should provide ongoing in-service training programs for the public and professionals through lectures, workshops, and seminars about impairment and issues related to it, and early intervention programs and their effectiveness. These seminars should cater to people of different backgrounds such as mothers, professionals in the different fields associated with impairment, Maternity and Pediatric Units staff, and birthing-mothers.
- 2) Hospital set-ups should also seek help from professionals or specialists in the area of early childhood and early intervention and organize ongoing in-service training workshops for mothers, and interested staff.
- 3) Centres with experiences in providing early intervention programs should also assist in ongoing in-service training programs to better utilize their services and experiences.
- 4) High schools should introduce awareness workshops for students about impairment and special needs children, to prepare them for basic and general knowledge about special needs individuals in society.

6.4.6 For establishing Early Intervention Programs

- 1) More centres that provide services for special needs children should begin to consider the provision of Early Intervention Programs as part of their services.

- 2) The Early Intervention programs should study the specific needs of the families and take into consideration the cultural, socio-economic, and religious aspects in designing such programs.
- 3) Currently available services should strive to improve and develop the quality of their programs.
- 4) New early intervention centres should take into account the most important findings from the present study regarding the specifics of the type of services. In addition, these centre should avoid the shortcomings which were present in the surveyed centres regarding parent-professional collaboration and interaction.

6.5 *Implications of the study*

One of the major implications from the findings of the present study is the fact that there is a tremendous need to expand and improve services offered to special needs individuals in order to match-up with the numbers of persons with impairments in the society at large. Also, the present study sheds light on the importance of establishing new early intervention services for special needs children and their families.

The mothers expression of severe need for more information and knowledge about the issue of impairment may imply that their level of awareness for such services is internally driven. Therefore, it may be assumed that if the mothers are sufficiently motivated regarding this issue, then they will utilize these services if provided to them.

Also, the Saudi society still believes in intermarriages in some regions of the country, which increases the probability of high genetic and hereditary disorders and the birth of children with different types of impairments. This is another implication for the importance of information and knowledge about impairments and its related issues in order to increase public awareness about some of the complications that may arise intermarriages. It can therefore be

implied that society at large lacks general knowledge and awareness about impairment and relating issues. The Saudi society has yet to adapt to having a segment of its population with some kind of impairments, and in need of special services.

Finally, the findings of the present study have shown the significance of early intervention services to special needs children and their families. Therefore, it can be implied that the earlier the intervention services are initiated with infants and their families, the sooner a specified educational or treatment program is set to benefit both the child and the family.

6.6 *Limitations of the study*

- 1) As the study focused only on the sample drawn from the only centre providing early intervention in Jeddah, the results of the study cannot be generalized to the other centres in the country.
- 2) The size of the sample in the study was small due to the limited availability of participants at the time the study was conducted.
- 3) The Questionnaire for Early Intervention Programs collected data on the available early intervention services in the Kingdom of Saudi Arabia in particular and the Gulf Area in general. Therefore, extrapolation based on the findings had to be restricted to only those centres that responded.
- 4) Geographic and ethnic variability can influence the reliability of the results and may be considered as yet another limitation to the study.
- 5) The frequencies and percentages of the mothers responses are an indication of the prevalence of the needs as expressed by the sample of mothers in the study, therefore should not be taken as representative of the whole population.

- 6) Other related variables such as the type of impairment, parental involvement, cultural and religious beliefs, can effect the expressed needs of the mothers, therefore future studies may help in identifying these effects.
- 7) As the study focused on the sample drawn from the only centre that provides early intervention services in Jeddah, the results from the study can not be generalized to other centres in the country.

6.7 Final Word

There are many models and ways which interventionists follow in applying early intervention services, but the question that always remains crucial is: *"how can the different models of early intervention be used in a way that is most appropriate to the main objective of early intervention, which is the child's and family's needs?"*

The interaction between the mother-infant and the involvement of the parents of the special needs child in the early intervention program influence the benefit acquired from the enrollment in such programs. Proper understanding and involvement of the mothers or parents roles in an early intervention program can influence the outcome of any intervention process. Therefore, it is important to stress stronger interventions directed toward parents, and/or mother-infant interaction.

Early intervention programs in The Kingdom of Saudi Arabia can be seen as the future toward improving early services provided for special needs children and their families. It is the responsibility of the professionals in the field of special education to establish new early intervention services, improve upon the presently available early intervention services, and finally to adapt these services to meet the needs of the children and their families within the context of the culture and its dynamics.

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APPENDIX A

LISTING OF CENTERS IN THE KINGDOM OF SAUDI ARABIA AND THE GULF AREA
THAT OFFER EARLY INTERVENTION SERVICES

Name of Center	Address	Phone Number
Disabled Children Association, Riyadh Center	P.O. Box: 8557 Riyadh 11429 Saudi Arabia	454-3913 (tel) 454-3521 (fax)
Disabled Children Association, Jeddah Center	P.O. Box: 13213 Jeddah 21493 Saudi Arabia	699-4556 (tel) 699-4608 (fax)
Help Center	P.O. Box: 51890 Jeddah 21553 Saudi Arabia	663-1113 (tel) 660-6403(fax)
Early Intervention Center for children with special needs	P.O. Box: 563 Safat 13006 Kuwait	532-0188 (tel) 532-0613 (fax)
Child Center for Daycare Services	P.O. Box: 32222 Essa City Bahrain	687-800 (tel) 686-954 (fax)
Dar Bahrain Bank for Rehabilitation of disabled Children	Building 1045, Street 1403 Compound 814, Essa City Bahrain	685-282 (tel)
Rehabilitation Center	Ministry of Labor and Social Affairs, P.O. Box : 32333 Bahrain	687-800 (tel)
Rashid Paediatric Therapy Center	P.O. Box : 456 Dubai United Arab Emirates	438-3998 (tel)
Center for Early Intervention	P.O. Box : 5796 Sharjah United Arab Emirates	351-144 (tel) 365-665 (fax)
AL-Sharja City for Humanitarian Services	P.O. Box : 5796 Sharjah United Arab Emirates	526-122 (tel)

APPENDIX B

QUESTIONNAIRE OF FAMILY'S BACKGROUND INFORMATION

Date:

Child's name:

D.O.B:

Parent's Name:

Relation to child:

The objective of this checklist is to get a general background on the child's family status in order to better understand and relate to the family's needs and conditions

- | | | | |
|--|---|--|--|
| 1. Marital status: | married <input type="checkbox"/> | divorced <input type="checkbox"/> | widowed <input type="checkbox"/> |
| 2. Mother's age : | 18 - 25 year <input type="checkbox"/> | 26-35 years <input type="checkbox"/> | above 35 years <input type="checkbox"/> |
| 3. Father's age: | 20 - 30 year <input type="checkbox"/> | 31 - 40 year <input type="checkbox"/> | above 40 years <input type="checkbox"/> |
| 4. Number of siblings: | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> | 3 <input type="checkbox"/> |
| | | 4 <input type="checkbox"/> | 5 <input type="checkbox"/> |
| | | | More (.....) <input type="checkbox"/> |
| 5. Father's education: | high school <input type="checkbox"/> | university <input type="checkbox"/> | other (.....) <input type="checkbox"/> |
| 6. Mother's education: | high school <input type="checkbox"/> | university <input type="checkbox"/> | other (.....) <input type="checkbox"/> |
| 7. Father's employment status: | employed <input type="checkbox"/> | unemployed <input type="checkbox"/> | |
| 8. Mother's employment status: | employed <input type="checkbox"/> | unemployed <input type="checkbox"/> | |
| 9. Father's salary/income: | less than 2000 SR <input type="checkbox"/> | less than 5000 SR <input type="checkbox"/> | above 5000 SR <input type="checkbox"/> |
| 10. Mother's salary/income: | less than 2000 SR <input type="checkbox"/> | less than 5000 SR <input type="checkbox"/> | above 5000 SR <input type="checkbox"/> |
| 11. Other family members living with you: | grand-parent <input type="checkbox"/> | uncle <input type="checkbox"/> | aunt <input type="checkbox"/> |
| | | | others (.....) <input type="checkbox"/> |
| 12. Type of residence: | rent apartment <input type="checkbox"/> | rent villa <input type="checkbox"/> | own apart/villa <input type="checkbox"/> |
| 13. Other special needs children in the family: | No <input type="checkbox"/> | Yes <input type="checkbox"/> | |
| 14. First learned about the disability of child: | before birth <input type="checkbox"/> | at birth <input type="checkbox"/> | after birth <input type="checkbox"/> |
| | during the 1 st year (.....) <input type="checkbox"/> | | |

APPENDIX C
MOTHERS' NEEDS QUESTIONNAIRE

Date:.....

Child's Name:.....

D.O.B:.....

Parent's Name:.....

Relation to child:.....

Mothers of special needs children have problems and stresses that accumulate to needs. Every mother has her own needs and priorities. Please fill this questionnaire to help in better understand your needs to be able to improve future services offered to you and your child.

Need / support desired	Severe Need	Moderate Need	No need
1. More information about child's problem			
2. More information about child development			
3. More information about child's social and emotional behavior			
4. More centre-based services			
5. More home-based services			
6. Solving problems with my own family			
7. Solving problems with spouse			
8. Solving problems with my other children			
9. Assistance in raising my children			
10. Better medical services for my special needs child			
11. Get in touch with another family with a special needs child			
12. Instructions on how to deal with my problems			
13. Meet a person who can help me relate better to my problems			
14. Teach me how to have my children better relate to their special needs sibling			
15. Assistance with finance			
16. Provide better technical aids			
17. Get in touch with other centers that may help me and my child			
18. To find time for myself			
19. To help me better organize my time & responsibilities			
20. To spend more time with my special needs child			
21. To help better understand the needs of my special needs child			
22. Solve my transportation problem			
23. How to involve the rest of the family with this child			

APPENDIX E

**LISTING OF CENTRES AND PRIVATE SCHOOLS IN THE KINGDOM OF
SAUDI ARABIA THAT OFFER SPECIAL EDUCATION SERVICES FOR
SPECIAL NEEDS CHILDREN**

Name of Centre	Region	Phone/Fax
Centre for Autistic Children	Jeddah	6622513 6622413 (fax)
Maharat Centre for Learning Disabilities	Jeddah	6656218 6601002 (fax)
Jeddah Institute for Speech and Hearing Difficulties (JISH)	Jeddah	6675311 6675233 (fax)
Tender Love and Care (TLC)	Jeddah	6554878 6641030 (fax)
The Help Centre	Jeddah	6631113 6606403 (fax)
Centre for Medical and Physiotherapy Services	Jeddah	6674131 6605224 (fax)
Amal Centre for Speech and Hearing	Jeddah	6514810
Home Care Services	Jeddah	6606403 ext 2017 6653400 (fax)
Disabled Children Association - Jeddah	Jeddah	6994556 6994608 (fax)
Saudi Rehabilitation Association	Riyadh	4418888 4413218 (fax)
Prince Sultan Bin Abdulaziz association for the Disabled	Riyadh	4827663 4822617 (fax)
Disabled Children Association (DCA) Riyadh	Riyadh	4543913 4543521 (fax)
Early Childhood Centre	Riyadh	4640812

Al-Nahda Philanthropic Society - AlNahda School for Down's Syndrome Children	Riyadh	4887218 4782474 (fax)
Al-Khozama Schools for Special Children	Riyadh	4020716 4020792 (fax)
Al-Nakeel School For Disabled Children	Riyadh	4659285
Al-Abakera School for Exceptional Children	Riyadh	4412750
Al-Awael Centre for Exceptional Children	Riyadh	4506948 4043832 (fax)
Al-Waey Centre for Speech and Language	Riyadh	4887116
Centre for psychological and Behavioral Problems	Riyadh	4657832 4631144 (fax)
Saudi Association for Down's Syndrome	Riyadh	4612119 4613457 (fax)
Disabled Children Association (DCA) AlJouf	AlJouf	6251357 6251461 (fax)
Disabled Children Association (DCA) Makkah	Makkah	5270090 5270091 (fax)
Gulf Ladies Association	AlKhobar	8981881
Saad Centre for Deaf children	Alkhobar	8981786 8981287 (fax)
Sihat Society for Humanitarian Services	Sihat	8502393
Philanthropic Rehabilitation Centre for the Disabled in the Eastern region	Dammah	8264846 8267045 (fax)

APPENDIX F**INTRODUCTION LETTER
(Sample)**

I would like to take this opportunity to introduce myself to you through the following data.

Name: Mrs. Mervat Tashkandi
Position: Director of Education Department
Disabled Children Association
Jeddah Centre
Status: Doctoral student at the University of South Africa (UNISA)
Pretoria, Republic of South Africa

Research Area: Special Education - Early Intervention

Research title: The relationship between needs of mothers' of physically and intellectually impaired children and current early intervention services in the Kingdom of Saudi Arabia and the Gulf.

I would appreciate your kind cooperation in filling out the attached questionnaire. This questionnaire is crucial in providing me with reference to the type and service of the early intervention program provided by your centre. As your centre is among the very few centres that provide such services. It is of utmost importance that I receive the basic information mentioned in the questionnaire, in order for me to include and mention your centre's services in my research.

My research so far has covered articles and research from the Western Countries. But I would like to at least mention the different available special services for special needs children in the Gulf Area. Kindly fill-out the questionnaire as soon as possible, and fax it to: 011-966-2-6975885

Sincerely,

Mrs. Mervat Tashkandi